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Brucellosis Eradication

Uniform Methods and Rules

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This publication is the Brucellosis Eradication Uniform Methods and Rules for establishing and maintaining:

1. Certified Brucellosis-Free Herds of Cattle
2. Class Free Areas
3. Class A Areas
4. Class B Areas
5. Class C Areas
6. Validated Brucellosis-Free Herds of Swine
7. Validated Brucellosis-Free Areas

The provisions of these methods and rules were approved by the U.S. Department of Agriculture, Animal and Plant Health Inspection Service, as the minimum standards for achieving and maintaining certified and validated herds and brucellosis area status after careful consideration of the recommendations by the United States Animal Health Association.

Part I of Chapter 1 and Part I of Chapter 2 contain the definitions of terms as used in these Uniform Methods and Rules. Part II of Chapter 1 and Part II of Chapter 2 contain the procedures to be followed. These procedures are in fact the minimum program standards for conducting the National Cooperative State-Federal Brucellosis Eradication Program. The definitions and procedures (Parts I and II) in Chapter 1 apply to bison as well as to cattle.

This publication may be amended in the future by the replacement or addition of revised pages.

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A. Reactor¹

1. Test-eligible official vaccinates are classified serologically as reactors when they disclose one or more of the following:
 - a. Complete standard plate test (SPT) or standard tube test (STT) agglutination reactions in the serum titer of 1:200 or higher.
 - b. Positive results with serum to the brucellosis standard card test where it has been the only test conducted.
 - c. Positive results with serum to the modified card test (reduced sensitivity) when it is adopted as an official test for use at all livestock markets within a State.
 - d. Fixation of 25 percent (1 plus) in a serum dilution of 1:40 or higher on the manual complement-fixation (CF) test.
 - e. Fixation in a serum dilution of 1:20 or higher on the Technicon automated complement-fixation test.
 - f. Complete agglutination reactions at the 1:25 serum titer or higher on the rivanol test when the CF test is not conducted or when the CF test is conducted and results in a CF reactor classification, or when the rivanol test discloses incomplete reaction at the 1:100 titer or higher.
 - g. Infection identified by other diagnostic procedures such as isolation of Brucella abortus.
2. All other test-eligible cattle are classified serologically as reactors when they disclose one or more of the following:
 - a. Complete SPT or STT agglutination reactions in the serum titer of 1:100 or higher.
 - b. Positive results with serum to the standard card test when it has been the only test conducted.
 - c. Fixation of 50 percent (2 plus) in a serum dilution of 1:20 or higher on the manual complement-fixation test.

¹ Also see Part II, I--"Classification."

- d. Fixation in serum dilution of 1:10 or higher on the Technicon automated complement-fixation test.
- e. Complete agglutination reactions in the 1:25 serum titer or higher on the rivanol test.
- f. Infection identified by other diagnostic procedures such as isolation of Brucella abortus.

The evaluation of titer responses for all cattle shall be the responsibility of a trained, experienced epidemiologist(s) who has been designated to perform and/or supervise this function in each of the States taking into consideration the animal and herd history and other epidemiologic considerations. The selection of the epidemiologist shall be made jointly by the cooperating animal health officials, the Regional Epidemiologist, and the brucellosis staff of the Cattle Diseases Staff, Veterinary Services (VS). Deviations from the above reactor criteria are acceptable when made by the designated epidemiologist.

B. Suspect¹

1. Test-eligible official vaccinates are classified as suspects when they disclose one or more of the following:
 - a. Any SPT or STT agglutination reaction at a serum titer of 1:100 or incomplete agglutination at a titer of 1:200.
 - b. A standard card test positive serum result unless it is the only test conducted. Cattle positive to the standard card test and not classified as reactors must be classified as suspects.
 - c. Fixation at 50 percent (2 plus) or more in a serum dilution of 1:10 and less than 25 percent fixation (1 plus) in the serum dilution of 1:40 on the manual complement-fixation (CF) test.
 - d. Fixation in a serum dilution of 1:10 but no fixation in a dilution of 1:20 on the Technicon automated complement-fixation (CF) test.
 - e. Complete rivanol test agglutination at a serum titer of 1:25 or greater but less than incomplete agglutination at the 1:100 titer, if the CF test result is in the negative or suspect range.
2. All other test-eligible cattle are classified as suspects when they disclose one or more of the following:

- a. Any SPT or STT agglutination reaction at a serum titer of 1:50 or incomplete agglutination at a titer of 1:100.
- b. A standard card test positive serum result if the cattle are negative to the SPT or STT test.
- c. Fixation at 50 percent (2 plus) or greater at a serum dilution of 1:10 but less than 50 percent fixation (2 plus) at a dilution of 1:20 on the manual complement-fixation (CF) test.
- d. Fixation at a serum dilution of 1:5 but no fixation at a dilution of 1:10 on the Technicon automated complement-fixation test.

The evaluation of titer responses for all cattle shall be the responsibility of a trained, experienced epidemiologist(s) who has been designated to perform and/or supervise this function in each of the States taking into consideration the animal and herd history and other epidemiologic considerations. The selection of the epidemiologist shall be made jointly by the cooperating animal health officials, the Regional Epidemiologist, and the brucellosis staff of Cattle Diseases Staff, Veterinary Services (VS). Deviations from the above suspect criteria are acceptable when made by the designated epidemiologist.

C. Negative¹

- 1. Test-eligible official vaccinates are classified as negative serologically when they disclose:
 - a. SPT or STT reactions of not more than complete agglutination at the 1:50 serum titer, if performed.
 - b. Negative results with serum to the standard card test, if performed.
 - c. Fixation at 25 percent or less (1 plus) at the 1:10 serum dilution on the manual CF test, if performed.
 - d. Fixation in a serum dilution of 1:5 or less but no fixation in a dilution of 1:10 on the Technicon automated complement-fixation test, if performed.
 - e. Less than complete agglutination at the 1:25 serum titer on the rivanol plate agglutination test, if performed. Within 5 months postvaccination of adult cattle, a less than complete agglutination at the 1:50 is negative.

2. All other cattle more than 6 months of age are classified as negative serologically when they disclose:
 - a. SPT or STT reactions of not more than complete agglutination in the 1:25 serum titer, if performed.
 - b. Negative results with serum to the standard card test, if performed.
 - c. Twenty-five percent fixation or less (1 plus) at the 1:10 serum dilution on the manual CF test, if performed.
 - d. No fixation in a serum dilution of 1:5 on the Technicon automated complement-fixation test, if performed.
 - e. Less than complete agglutination at the 1:25 serum titer on the rivanol plate agglutination test, if performed.

Blood samples collected at slaughter are serologically negative when no evidence of agglutination is disclosed by the rapid screening test (RST) or buffered acidified plate antigen (BAPA) test. Blood samples collected at livestock markets are serologically negative when no evidence of agglutination is disclosed on the BAPA test. Blood samples collected at slaughter or at livestock markets showing some agglutination to the RST or the BAPA test, as appropriate, are classified negative if the confirmatory test (standard card test or SPT) is negative.

- D. Test-Eligible Cattle
1. Herd blood test--Herd tests shall include all cattle over 6 months of age except steers, spayed heifers, official calfhood vaccinates of the dairy breeds under 20 months of age, and official calfhood vaccinates of beef breeds under 24 months of age (as evidenced by the presence of the first pair of permanent incisor teeth) which are not parturient (springers) or postparturient.
 2. Market Cattle Identification (MCI) blood testing --
 - a. Slaughtering establishment--All cows and bulls over 2 years of age shall be blood sampled.
 - b. Livestock markets, farms, or ranches--Blood sampling shall be for all cattle over 18 months of age (as evidenced by the loss of the first pair of temporary incisor teeth) except steers, spayed heifers,

official calfhood vaccinates of the dairy breeds under 20 months of age, and official calfhood vaccinates of beef breeds under 24 months of age (as evidenced by the presence of the first pair of permanent incisor teeth) which are not parturient (springers) or postparturient.

3. Other movements--Tests shall be the same as 2, b.

E. Herd Blood
Test

The herd blood test must include all test-eligible cattle (Part I, D, 1, above). Bulls, steers, and female cattle being held in feedlots which meet the requirements defined in Part I, I (Quarantined Feedlot) are exempt from herd blood test requirements because they are not defined as herds. The tested cattle shall be identified with an official eartag (Part I, M) or official registration tattoo on purebred cattle. Large-numbered, unique, plastic bangle tags may be used additionally if correlated on test records with the official eartag.

F. Herd

A herd is all cattle (genus Bos) under common ownership or supervision that are grouped on one or more parts of any single premises (lot, farm, or ranch). A herd is all cattle (genus Bos) on two or more premises geographically separated but on which the cattle have been interchanged or where there has been contact of cattle between the premises. Such contact shall be accepted as having occurred unless otherwise established by the owner. In addition, the noninterchange of cattle and/or lack of contact must be consistent with the findings of the epidemiologic investigation. (Quarantined Feedlots Part I, I, and Quarantined Pastures Part I, J, are not herds.)

For brucellosis eradication purposes, groups of cattle under multiple ownership on common premises, such as community pastures, grazing association units, etc., shall also be considered as a herd. Such herds shall include all other groups of cattle owned by those persons unless the epidemiologic investigation establishes that association has not occurred.

For determining herd infection rates, such negative multiple ownership may be counted as separate herds at risk and only designated as a single unit when classified as affected.

G Individual
Herd Plan

A herd management and testing plan designed by the herd owner, his veterinarian if so requested, and a veterinarian of the Cooperative Brucellosis Eradication Program which will control and eventually eradicate brucellosis from an affected herd. A similar plan for determining the true status of

suspects and preventing exposure to brucellosis within the herd is also within the meaning of the term "individual herd plan."

The plan will utilize those veterinary procedures most applicable and the proven herd management procedures necessary to assist these procedures in controlling the spread of brucellosis within the herd and thereby eradicating the disease from the herd. (See Part II, T.)

H. Feedlot A confined drylot area for finish feeding of animals on concentrated feed with no facilities for pasturing or grazing. The feedlot shall not hold animals which have not met the required testing procedures at origin and destination.

The feedlot must be treated as a herd if infection is traced to it by surveillance procedures or by epidemiological measures. This would mean quarantining of the feedlot and the breeding animals on the premises until released by the slaughter of all quarantined animals in the feedlot or alternatively by testing procedures.

I. Quarantined Feedlot A quarantined feedlot shall be a confined area under official State quarantine and shall be approved jointly by the State and Federal animal health officials. All animals in a quarantined feedlot shall be classified as exposed to brucellosis. The quarantined feedlot shall be maintained for finish feeding of animals in drylot with no provisions for pasturing or grazing. There shall be no breeding or "two-way" cattle allowed in the quarantined feedlot. All negative exposed animals and all untested test-eligible cattle must be permanently identified with a hot iron "S" brand either on the left jaw or high on the tailhead (over the fourth to the seventh coccygeal vertebrae) upon entering such feedlots. All cattle except steers and spayed heifers leaving such feedlot must go directly to slaughter; or may be moved directly to another quarantined feedlot with a permit from the State animal health official; or may be "S" branded at the feedlot and move to a market to be sold for movement with a 1-27 permit issued at the market directly to another quarantined feedlot or directly to slaughter. The animal health officials shall establish procedures for accounting of all animals entering or leaving such quarantined feedlots. Community notification shall be made of the presence of a quarantined feedlot. (See Part II, F.)

J. Quarantined Pasture A quarantined pasture shall be a designated, confined area for grazing under official State quarantine and shall be approved jointly by the State and Federal animal health officials. In all areas, animal health officials shall

request approval from the Deputy Administrator, Veterinary Services, APHIS, and justify the need. Where approved, quarantined pastures may receive only intrastate cattle and may not involve interstate movements except to slaughter or quarantined feedlots. An intensified eradication effort which produces large numbers of exposed or adult vaccinated animals needing the grazing period to reach slaughter condition would be an acceptable justification. All animals in the quarantined pasture shall be classified as exposed to brucellosis. The quarantined pasture shall be for the purpose of utilizing available forage to grow or to improve flesh condition of cattle. There shall be no breeding or "two-way" cattle allowed in the quarantined pasture. Sex shall be the same (e.g., all cows or all bulls except that neutered animals may share the quarantined pasture). All animals except steers and spayed heifers must be permanently identified with a hot iron "S" brand either on the left jaw or high on the tailhead (over the fourth to the seventh coccygeal vertebrae) upon entering the quarantined pasture). All animals except steers and spayed heifers leaving the quarantined pasture must move only for immediate slaughter or to a quarantined feedlot. The movement shall be in accordance with established procedures for handling quarantined (exposed) animals (See Part II, M) including issuance of "S" brand permits prior to movement.

The animal health official shall establish procedures for accounting of all animals entering or leaving the quarantined pasture. Approval of a quarantined pasture shall not exceed a period longer than 10 months. All exposed cattle must vacate the premises on or before the expiration of approval. Community notification shall be made of the presence of a quarantined pasture.

- K. "S" Branded Cattle Cattle which have been identified by branding with a hot iron the letter "S" (at least 2x2 inches) placed on the left jaw or high on the tailhead (over the fourth to the seventh coccygeal vertebrae). "S" branding is required for exposed cattle and for untested test-eligible cattle, originating in Class B or Class C States or areas and quarantined areas, to move in marketing channels from farms or markets to quarantined feedlots (Part I, I), to quarantined pastures (Part I, J), or to immediate slaughter if moved by rail or motor carriers. Testing of test-eligible cattle is recommended in lieu of "S" branding. Finished fed heifers moving in marketing channels directly to slaughter will be exempted from the "S" branding requirement.

L. Permit

1. Permit--As used in these rules, except for the terms "permit for entry" and "S" brand permit, a permit shall

mean an official document (VS Form 1-27 or comparable State form) issued by a Veterinary Services representative, State representative, or accredited veterinarian which is required to accompany "B" branded cattle and bison (or exposed cattle and bison moved under official seal). It will list one of the following: the identification tag, tattoo, USDA backtag, registration number, or similar identification. It will also list the reactor tag number, owner's name and address, origin and destination locations, number of cattle covered, and the purpose of the movement. If a change in destination becomes necessary, a new permit must be prepared. No diversion from the permitted destination is allowed. Distribution of the copies is printed on the official document and must be followed.

2. Permit for entry--As used in these rules, a permit for entry shall mean a premovement authorization for entry of cattle into a State from the animal health official in that State. The authorization will state the conditions under which movement may be made, and these conditions may be in addition to the requirements of these UM&R and Code of Federal Regulations.
3. "S" brand permit--As used in these rules, an "S" brand permit shall mean any document which is required to accompany animals in marketing channels having a restricted destination. It must show the origin, the destination, the number of restricted cattle, the purpose of the movement, the USDA backtag numbers (when applied serially, only the beginning and the ending number need be recorded), and a statement certifying to the "S" brand identification. It shall be prepared at the point of origin by an accredited veterinarian, a representative of the animal health officials, or a designated official at a quarantined feedlot. A copy of this "S" brand permit shall be immediately sent to the State animal health official with the original accompanying the animals. The original shall be delivered at the destination and retained at that location for a minimum of 6 months.

M. Official
Eartag

An official eartag is a metal identification eartag conforming to the nine-character alpha-numeric National Uniform Eartagging System and of appropriate color (e.g., orange for vaccination). It provides unique identification for each individual animal.

N. Market Test
Animals

Market test animals are test-eligible animals (Part I, D, 2) moving in trade through auction markets, stockyards, or to slaughtering establishments; also they are those animals

assembled at farms or ranches that are being readied for immediate movement to markets, stockyards, or slaughtering establishments or other sales. Such animals shall be identified by eartag and/or backtag to the herd of origin prior to or at the first point of concentration in marketing channels.

0. Approved Brucella Vaccine A product that is approved by and produced under license of the U.S. Department of Agriculture for injection into cattle to enhance their resistance to brucellosis.
- P. Official Vaccinate 1. Official calfhood vaccinate
- a. For States administering an approved reduced dosage Brucella abortus Strain 19 vaccine containing at least 3 billion and not more than 10 billion live cells with an optimum of 5 billion live cells per 2 ml dose: Female cattle of any breed or female bison vaccinated while from 4 through 12 months (120 through 365 days) of age with the optimum vaccination age of 5 months by a Veterinary Services representative, State representative, or accredited veterinarian with Brucella abortus Strain 19 vaccine in accordance with its labeling.
- Vaccinated animals must be permanently identified as calfhood vaccinates and reported at the time of vaccination to the appropriate State or Federal agency cooperating in the eradication of brucellosis.
- b. For States utilizing (until December 31, 1984) an approved full dosage Brucella abortus Strain 19 vaccine containing a minimum of 25 billion live cells per 5 ml dose:
- Female cattle of a dairy breed vaccinated by a Veterinary Services representative, State representative, or accredited veterinarian with Brucella abortus Strain 19 vaccine in accordance with its labeling while from 2 through 6 months (60 to 179 days) of age. Female cattle of a beef breed or female bison vaccinated by a Veterinary Services representative, State representative, or accredited veterinarian with Brucella abortus Strain 19 vaccine in accordance with its labeling while from 2 through 10 months (60 to 299 days) of age.
- Vaccinated animals must be permanently identified as calfhood vaccinates and reported at the time of vaccination to the appropriate State or Federal agency cooperating in the eradication of brucellosis.

2. Official adult vaccinate

- a. For States administering an approved Brucella abortus Strain 19 vaccine containing at least 300 million and not more than 1 billion live cells with an optimum of 500 million live cells per 2 ml dose: Female cattle of any breed or female bison vaccinated beyond the age limit for official calfhood vaccination by a Veterinary Services representative, State representative, or accredited veterinarian with Brucella abortus Strain 19 vaccine as instructed by the Veterinarian in Charge and the State animal health official and as a part of a "whole herd vaccination" plan authorized by the State animal health official and the Veterinarian in Charge.

Vaccinated animals must be permanently identified as adult vaccinates and reported at the time of vaccination to the appropriate State or Federal agency cooperating in the eradication of brucellosis.

- | | |
|---------------------------------|--|
| Q. Whole Herd Vaccination | With "whole herd vaccination," animals older than the age of official vaccination can be vaccinated under specific conditions with a reduced dose of vaccine. All eligible calves shall also be vaccinated and identified. (See Part II, R--Whole herd vaccination plan.) |
| R. Identification of Vaccinates | <ol style="list-style-type: none">1. <u>Calfhood vaccinates</u>--Calfhood vaccinated animals shall be permanently identified as vaccinates by tattoo and by official vaccination eartag. (If already identified with an official eartag prior to vaccination, an additional tag is not required.) Vaccination tattoos must be applied to the right ear. The tattoo will include the U.S. Registered Shield and "V", which will be preceded by a number indicating the quarter of the year and will be followed by a number corresponding to the last digit of the year in which the vaccination was done. Official vaccination eartags shall be applied to the right ear. The eartag will include the State prefix and a "V", followed by two letters and four numbers which will individually identify such vaccinated animal. Individual animal registration tattoos or individual animal registration brands may be substituted for official eartags.2. <u>Over calfhood age</u>--Animals which have been vaccinated over calfhood age in authorized "whole herd vaccination" shall be permanently identified as vaccinates by the following procedures: |

- a. Brucellosis-affected herds and herds not Certified Brucellosis-Free but at high risk--By an open ended "V" hot brand on the right jaw or high on the hip near the tailhead, or by an official "AV" (adult vaccination) tattoo in the right ear preceded by the quarter of the year and followed by the last digit of the year, as well as the official metal eartags (or individual animal registration tattoo or individual animal registration brand) applied at the time of conducting the required preliminary blood test. Large-numbered, unique, plastic bangle tags are recommended to be used additionally and to be correlated on test records with the official eartag.
- b. Certified Brucellosis-Free Herds--By an official "AV" (adult vaccination) tattoo in the right ear preceded by the quarter of the year followed by the last digit of the year, as well as the official metal eartags (or individual animal registration tattoo or individual animal registration brand).

S. Traceback of Reactors

1. Successful traceback of reactors--A successful traceback occurs when the premises or herd of origin of a market test reactor, including those animals identified as reactors on laboratory confirmation of market test, is located and the herd (as defined in Part I, F) is tested as is deemed necessary. Tracebacks to dealers, commission firms, and such are not considered successful tracebacks of reactors if the investigation ceases at that point and all possible herds of origin are not tested. "Soldout" herds to be considered as successful tracebacks shall be confirmed by documentation of slaughter and shall have no test-eligible cattle remaining. (See Part I, F, Herd.) MCI reactors traced to such "soldout" herds shall not be included in the determination of the MCI Reactor Prevalence Rate but will be included in the determination of the Herd Infection Rate for State or area classification. (For exceptions, see Part V, C, 2, b, and 3 and Part VI, C, 2, b, and 3.) Tracebacks to feedlots (Part I, H) are successful and are to be treated as a herd. Tracebacks to quarantined feedlots (Part I, I) and to quarantined pastures (Part I, J) are successful and are reported as traced to known reactor herds. A preentry test of test-eligible cattle is strongly recommended for cattle entering these quarantined feedlots and quarantined pastures.

2. Epidemiologic investigation of reactors--Every trace-back requires an epidemiologic investigation and follow-up as outlined in (a) and (b) below (including traces to "soldout" herds) to effectively locate and control the disease. This investigation must include the following:
 - a. Reactors in marketing channels with positive CF, rivanol test, modified card test, or standard card test when it is the only test conducted, or appropriate supplemental test titers:
 - (1) Contact and/or adjacent herds shall be identified, recorded, and investigated.
 - (2) Blood test the herd of origin (Part I, F) unless the epidemiological investigation indicates that the titers are not caused by field strains of B. abortus. Where a blood test is not conducted, the representative of the cooperating animal health agencies will prepare a statement indicating this was discussed with the owner or his representative and listing the reasons the herd was not tested. The statement shall be signed by both parties and both parties shall retain a copy.
 - (3) In Class Free and Class A areas, all sales following the estimated date of onset of infection shall be traced and the herds of destination identified, recorded, and investigated for evidence of infection by testing. If not tested, an agreement as in (2) shall be made. In Class B and Class C areas, this will be carried out to the extent resources are available.
 - (4) If the herd is negative, the herd will be retested 30 to 90 days later if deemed necessary by the epidemiologist.
 - b. Reactors in marketing channels which are not positive to the CF, rivanol test, modified card test, or supplemental tests: The owner shall be advised of these results by writing, by telephone, or by personal visit. A joint decision shall be reached to test or not to test the herd. Any decision not to test shall be documented. The herd shall be tested if reasonable doubt exists as to the reason for the serologic response, or if evidence of brucella infection is present, or if the status of contact or other neighborhood herds is questionable.

T. Certified Brucellosis-Free Herd	See Part IV.
U. Exposed Animals	Animals that are part of a known infected herd, or that have been in contact with brucellosis reactors in marketing channels for periods of 24 hours or periods of less than 24 hours if the reactor has recently aborted, calved, or has a vaginal or uterine discharge are considered to be exposed regardless of the blood test results and must be placed under quarantine and restricted pending slaughter or testing after return to herd of origin. (See Part II, M, for handling procedures.)
V. Cattle	The term cattle (genus Bos) includes all dairy and beef animals.
W. Dealer	<ol style="list-style-type: none"> 1. Any person engaged in the business of buying or selling livestock in commerce either on his own account or as the employee or agent of the vendor and/or purchaser, or 2. Any person engaged in the business of buying or selling livestock in commerce on a commission basis. 3. The term shall not include a person who buys or sells livestock as part of his own bona fide breeding, feeding, or dairy and/or beef operations and is not engaged in the business of buying, selling, trading, or negotiating the transfer of livestock, nor a person who receives livestock exclusively for immediate slaughter on his own premises.
X. Auctioneer	A person who sells or makes a business of selling livestock at auction.
Y. Auction	A public sale of livestock to the highest bidder.
Z. Commission Firm	A person, partnership, or corporation who buys and sells livestock as a third party and reports to the seller and/or to the buyer details of the transactions. This includes any such person or groups whether or not a fee is charged for the service.
AA. Commission Sales	Those sales which are conducted by a third party, who reports to the seller and/or to the buyer details of the transactions.
BB. Certificate	An official document issued by a Veterinary Services representative, State representative, or accredited veterinarian at

the point of origin of a shipment of domestic animals which shows the individual identification tag, individual animal registered breed association registration tattoo, or individual animal registered breed association brand number, or registration number or similar identification of each animal to be moved, the number of animals covered by the document, the purpose for which the animals are to be moved, the points of origin and destination, the consignor, and the consignee. Ownership brands may be used as identification on certificates for cattle being shipped interstate where brucellosis or other official tests are not required, provided the ownership brands are registered with an official brand recording agency and are accompanied by official brand inspection certificates.

- CC. Specifically Approved Stockyard A stockyard specifically approved by the Deputy Administrator for the purposes of the brucellosis interstate movement regulations when he determines that the inspection and handling of livestock at such stockyards are adequate to effectuate the purposes of the regulations and that Veterinary Services and the State in which such stockyards are located have entered into a Memorandum of Understanding setting forth certain standards for such stockyards.
- DD. Recognized Slaughtering Establishment Any slaughtering establishment operating under the provisions of the Federal Meat Inspection Act (21 U.S.C. 601 et seq.) or a State meat inspection act.
- EE. Finished Fed Cattle Cattle in a quarantined feedlot which have been on feed for a sufficient period of time to achieve the flesh condition desired by the slaughter establishments.

PART II
Procedures--Minimum Program Standards

- A. Laboratories Blood samples are to be tested only by cooperating State-Federal laboratories or by such persons as may be authorized to conduct the standard agglutination tests or the card test. All samples initially tested at other than cooperating State-Federal laboratories shall be promptly submitted and confirmed at the cooperating State-Federal laboratory. Each State or region shall have the laboratory capability of conducting the complement-fixation and rivanol tests, and of bacteriological culturing services for viability counts of vaccine and/or the isolation of B. abortus from milk and tissues. A cooperative system shall exist with States, universities, and industry for regular review of the training and the performance of laboratory personnel and for assisting laboratories in the development of systems of continuing quality control for all laboratory tests and culturing procedures. State and regional laboratories shall be evaluated by a review committee, which includes qualified epidemiologists, at least once in each 3-year period.
- B. Reporting Activities conducted privately as part of the official Brucellosis Eradication Program, such as results of agglutination tests or vaccination, shall be reported immediately to cooperating agencies and to the herd owner.
- C. Supervision The official Brucellosis Eradication Program shall be supervised by full-time animal health veterinarians.
- D. Quarantines All cattle, except steers and spayed heifers, including officially vaccinated heifers and calves in affected herds, shall be confined to the premises until the herd is freed of brucellosis or sold for slaughter under permit or "S" brand permit. (See Part II, M, for an exception.) Two consecutive negative herd blood tests are required for release of quarantine with the first negative herd blood test occurring not less than 30 days after the removal and slaughter of all previous reactors. The releasing test (the required second negative herd blood test) shall occur not less than 120 days following the removal of the last reactor. The releasing test shall include all nonneutered cattle over 6 months of age. (The purpose for the test of the official vaccinates of dairy breeds under 20 months of age and of beef breeds under 24 months of age is to establish "base-line" titers in evaluating the probability of field strain brucella infections in these animals when retested.)

Exceptions on the interval between tests required for the release of quarantine are allowable only when Brucella abortus Strain 19 organisms have been isolated from the

reactor animal or all epidemiologic evidence is consistent with a Brucella abortus Strain 19 infection and not with field strain infection.

Certified Brucellosis-Free herds quarantined for a "whole herd vaccination" program, may be released in accordance with the provisions of Part II, R, 3, b.

In all areas, an additional blood test of all nonneutered cattle over 6 months of age in the herd is required either not less than 6 months or more than 12 months after release of an affected herd from quarantine or not less than 10 months or more than 16 months after removal of the last reactor.

- E. Retests of Affected Herds Retests of affected herds shall be conducted in accordance with an individual herd plan (Part II, T). Under routine conditions, retests are recommended at approximately 30-day intervals until the herd has passed at least one negative herd test following the removal and sale for slaughter of the last reactor. A second consecutive negative herd blood test occurring not less than 120 days following the removal of the last reactor is necessary to qualify herds for release of quarantine as indicated in Part II, D. Continuation of testing is strongly recommended at 30-day intervals between the first and second negative herd tests which qualify the herd for quarantine release.
- F. Community Notification of Brucellosis Affected Herds The status of herds placed under quarantine for brucellosis and the approval of quarantined feedlots and quarantined pastures are to be made known to herd owners in the immediate community. Such herd owners shall be notified by means of an educational letter delivered through personal contact or by mail within 30 days of the issuance of the quarantine. The purpose of this notification is to emphasize to owners the importance of taking appropriate actions to protect their cattle against the disease threat posed to them by the presence of an affected herd in their community. When the herd quarantine is released, or the quarantined feedlot approval is terminated, the herd owners shall also be notified within 30 days by an educational letter delivered through personal contact or by mail.
- G. Adjacent Herd and Epidemio-logically Traced Herd Testing Adjacent herds, or herds sharing common pasture or having other contact with the affected herd, and herds containing previous purchases from or exchanges with the affected herd shall have an adjacent herd plan within 30 days of disclosure of the affected herd. (See Part III, C.) The plan may involve testing up to the level of an infected herd. If a disagreement occurs, consultation between the herd owner,

chief animal health official, the epidemiologist, and the owner's veterinarian, if requested, will be held to resolve the situation.

When the quarantine is released on the brucellosis affected herd, the owners of the potentially exposed herds, as described above, shall be notified of the desirability of a second negative herd blood test. If the herd owner decides not to have a second test, the representative of the animal health agencies will prepare a statement indicating that the value of a second test was discussed with the owner and listing the reasons the herd was not further tested. A copy of this statement will be given the herd owner.

H. Cleaning and
Disinfection

Premises shall be cleaned and disinfected under regulatory supervision within 15 days following the removal of reactors or the entire herd for slaughter or the requirements of 9 CFR 51 have been met to qualify for Federal indemnity.

I. Classifi-
cation

1. Standard Card Test (standard sensitivity pH 3.8) -- Standard card test results are classified as either negative or positive. The card test is to be used as an official test to classify cattle as reactors only under the circumstances listed below.
 - a. When conditions and time are such that no other test is available, or
 - b. On request of the owner and/or his agent because of time or situation constraints, or
 - c. In livestock markets when the State animal health official specifically designates the card test as the official test in livestock markets. No other test shall be used in livestock markets as an official test in those States where the card test has been given official test status in livestock markets.
 - d. Market Cattle Identification (MCI) test samples are to be tested by the standard card test or an approved presumptive test (BAPA or RST). All presumptive test positive samples shall be retested using the standard card test or standard agglutination test. If the modified card test is used, procedures in Part II, I, 2, should be followed. All samples positive to the standard card test or standard agglutination test, in the absence of further testing, will be reported as MCI reactors and traced to the herd of origin.

- e. Standard card tests may be used to classify animals as negative on surveillance samples collected at slaughter, on routine samples collected on farms, and on tests of suspicious and affected herds.

Results of the standard card test may be used in conjunction with other test results conducted in the State-Federal laboratory to aid in classification of cattle as reactors.

2. Modified Card Test (reduced sensitivity pH 3.3) --
Modified card test results are classified as either negative or positive. Any agglutination in this test is considered a positive result. The modified card test is a buffered card test with antigen sensitivity comparable to a positive reaction at the 1:25 dilution of the rivanol test. Upon acceptance by State Veterinarian and Area Veterinarian in Charge, this test would be used as a diagnostic test for officially vaccinated cattle in all livestock markets in that State. At the livestock market, test-eligible cattle are to be tested by the standard card test or an approved presumptive test (BAPA). Any presumptive test positive sample would be retested using the standard card test. If officially vaccinated animals are positive to the standard card test, they would be retested with the modified card test (pH 3.3). Vaccinated animals positive to the standard card test and negative to the modified card test would be considered suspects and restrictions would not be placed on the balance of the animals. Confirmation testing at the State-Federal laboratory would be continued as prescribed in Part II, A. All such suspects could be returned to the farm of origin under quarantine and retested or be "S" branded and sold. If the herd of origin no longer exists or the owner decides to slaughter the animal(s), the tissues from the suspect animal should be cultured for brucella. Further epidemiological investigation of the adjacent and other contact herds must be conducted to determine if infection is present. The extent of the investigation would be determined by the epidemiologist. Officially vaccinated animals positive to both card test antigens will be considered as reactors and all exposed animals shall be "S" branded or sold or returned to the farm of origin under quarantine. Nonvaccinated animals positive to the standard card test are considered reactors when the standard card test has been the only test conducted.

3. Standard Tube Test (STT) or Standard Plate Test (SPT) --
The blood titers of cattle tested by the STT or SPT
 methods are classified by use of the following:

Official Vaccinates

1:50	1:100	1:200	
-	-	-	NEGATIVE
I	-	-	NEGATIVE
+	-	-	NEGATIVE
+	I	-	SUSPECT
+	+	-	SUSPECT
+	+	I	SUSPECT
+	+	+	REACTOR

All Other

1:50	1:100	1:200	
-	-	-	NEGATIVE
I	-	-	SUSPECT
+	-	-	SUSPECT
+	I	-	SUSPECT
+	+	-	REACTOR
+	+	I	REACTOR
+	+	+	REACTOR

4. Manual Complement-Fixation Test (CF) --The complement-fixation test when conducted by manual methods approved by National Veterinary Services Laboratories (NVSL) is an official test.

- a. Interpretation of all nonvaccinated test-eligible cattle:

- (1) Fifty percent fixation (2 plus) in a dilution of 1:20 or higher--reactor.
- (2) Fifty percent fixation (2 plus) in a dilution of 1:10 but less than 50 percent fixation (2 plus) in a dilution of 1:20--suspect.
- (3) Less than 50 percent fixation (2 plus) in a dilution of 1:10--negative.

- b. Interpretation of all test-eligible vaccinated cattle including adult vaccinated animals beginning 2 months postvaccination:

- (1) Twenty-five percent fixation (1 plus) in a dilution of 1:40 or higher--reactor.

- (2) Fifty percent fixation (2 plus) in a dilution of 1:10 but less than 25 percent fixation (1 plus) in a dilution of 1:40--suspect.
 - (3) Less than 50 percent fixation (2 plus) in a dilution of 1:10--negative.
- 5. Technicon Automated Complement-Fixation Test --The Technicon automated complement-fixation test is an official test when conducted by recognized methods.
 - a. Interpretation of all nonvaccinated test-eligible cattle:
 - (1) Fixation in a dilution of 1:10 or higher--reactor.
 - (2) Fixation in a dilution of 1:5 but no fixation in a dilution of 1:10--suspect.
 - (3) No fixation in a dilution of 1:5 or lower--negative.
 - b. Interpretation of all test-eligible vaccinated cattle including adult vaccinated animals beginning 2 months postvaccination.
 - (1) Fixation in a dilution of 1:20 or higher--reactor.
 - (2) Fixation in a dilution of 1:10 but no fixation in a dilution of 1:20--suspect.
 - (3) Fixation in a dilution of 1:5 or less but no fixation in a dilution of 1:10--negative.
- 6. Rivanol Test --The rivanol test is an official test when conducted in State-Federal laboratories. Complete agglutination at dilutions of 1:25 or more is a reactor in nonvaccinated cattle and in vaccinated cattle when the complement-fixation test is not conducted. Less than complete agglutination at the 1:25 dilution is negative.

Officially vaccinated animals with agglutination of complete in the 1:50 dilution or less may be classified as suspect when that interpretation is supported by a complement-fixation test result of suspect or negative using the presently accepted complement-fixation test classification scheme for vaccinated cattle.

Incomplete or complete agglutination in the 1:100 dilution or in higher dilutions is a reactor in vaccinated cattle.

Within 5 months postvaccination of adult cattle, a less than complete agglutination at the 1:50 is negative.

7. Semen Plasma Test --The semen plasma test is approved as an official test in bulls for artificial insemination when used in conjunction with another official serological test. The classification of such animals shall be based on the maximum agglutination titer of either the serological test or the semen test.
8. Buffered Acidified Plate Antigen (BAPA) Presumptive Test --BAPA presumptive tests may be used to classify animals negative on surveillance samples collected at slaughter and at livestock markets. Such tests may also be used as presumptive tests for routine samples collected on farms where there is no evidence of brucellosis. On tests of suspicious and affected herds, BAPA tests may be used in addition to other tests.
9. Rapid Screening Test (RST) --The RST may be used as a presumptive test for classifying animals negative in State-Federal laboratories.
10. Supplemental Tests --Supplemental tests are other tests developed to aid in determining the presence or absence of blood components associated with field strains of B. abortus, Strain 19, nonspecific agglutins, etc. Of these, only the card test is an official test when used as the sole test on a blood serum sample. Other procedures include ME (Mercaptoethanol), Coombs, HI at 56° C and 65° C (Heat Inactivation), APA (Acid Plate Antigen) at various pH's, FA (Fluorescent Antibody), ELA (Enzyme Labeled Antibody). Research being conducted may add other supplemental tests from time to time. Interpretation and the use of supplemental tests must be by the designated epidemiologist.
11. Reclassification of Reactors --Animals initially classified reactors, including MCI reactors, under Part I, A, may be eligible for reclassification provided a complete epidemiological investigation of the herd is conducted and there is no evidence of brucella infection or exposure thereto; and, provided final classification is determined by a designated brucellosis epidemiologist. The herd must remain under quarantine pending final classification.

J. Identification of Reactor Cattle All reactor cattle shall be permanently identified by hot iron branding with the letter "B" (at least 2x2 inches) placed on the left jaw. An approved reactor tag must be

placed in the left ear. Identification of reactors must be accomplished within 15 days of the test date. The time may be extended 15 days for reasons mutually acceptable to the cooperating State and Federal officials in charge.

- K. Identification 1. Exposed--All exposed cattle moving from a premises of origin or from a livestock market to a quarantined feedlot or quarantined pasture, or to slaughter shall be identified by branding with a hot iron the letter "S" (at least 2x2 inches) placed on the left jaw, or high on the tailhead (over the fourth to the seventh coccygeal vertebrae). Identification shall be prior to movement, or exposed cattle on the premises of origin may be identified and permitted to a livestock market where they shall be identified by "S" brand upon arrival. Exposed cattle returned from the livestock market to the herd of origin under quarantine pending further testing are exempt from this "S" branding requirement. Exposed cattle may move with an "S" brand permit from the farm of origin or from specifically approved markets direct to Federal or State inspected slaughtering establishments in a sealed truck without permanent identification by "S" brand as stated in Part II, M. Exposed cattle in herd depopulations shall be "B" branded to qualify for Federal indemnity instead of by "S" branding. An exception is allowed for finished fed heifers moving directly to immediate slaughter and for such cattle when movement to slaughter does not require rail or motor carrier transportation.
2. Untested test-eligible cattle (Part I, D, 2, b)--Such cattle in marketing channels having originated from Class B and Class C States or areas, which are being moved or sold shall be identified and moved in the same manner as prescribed for exposed cattle (see par. 1, above) unless they were part of a Certified Brucellosis-Free herd. Testing of test-eligible cattle is recommended in lieu of "S" branding.
3. Suspects--Cattle classified as suspects which are being moved or sold shall be identified and moved in the same manner as prescribed for exposed cattle (see par. 1, above).

Movements without change of ownership from a farm of origin directly to a livestock market are exempt from the "S" branding requirement, but the cattle must be tested upon arrival or be "S" branded.

L. Immediate Slaughter

1. Reactor cattle--Reactor cattle and "B" branded exposed cattle in herd depopulation must be sold for immediate slaughter and removed from the premises under State or Federal permit within 15 days of the date of identification. The time may be extended 15 days for reasons mutually acceptable to the cooperating State and Federal officials in charge. Reactors and "B" branded exposed cattle in herd depopulations shall remain on the premises where disclosed until a State or Federal permit for movement to slaughter has been obtained. Movement for immediate slaughter must be to a slaughtering establishment where Federal or State inspection is maintained or to a State or Federal approved market for sale to such slaughter establishment. There shall be no diversion from the permitted destination.
2. Exposed cattle--Exposed cattle consigned for immediate slaughter shall remain on the premises of origin until an "S" brand permit for movement to slaughter has been prepared. Movement for immediate slaughter must be to a slaughtering establishment where State or Federal inspection is maintained or to a State or Federal approved market for sale to such a slaughtering establishment. There shall be no diversion from the permitted destination.

M. Movement of Restricted Animals

Reactors, "B" branded exposed cattle, and "S" branded cattle must be moved under permit or "S" brand permit as appropriate. There shall be no diversion from the permitted destination. When moved, the cattle must be maintained separate and apart from all other classes of livestock in specially designed pens reserved for this purpose at Specifically Approved Stockyards or State approved livestock markets or trucking facilities. These pens must be thoroughly cleaned and disinfected before being used for other than brucellosis-affected animals. Calves under 6 months of age which are nursed by brucellosis-exposed cows may move from the quarantined premises within 10 days after a negative brucellosis test on the dam. Calves under 6 months of age which are nursed by brucellosis reactor or exposed cows may also move from the quarantined premises provided they have been weaned for not less than 30 days immediately preceding the movement. However, officially vaccinated calves under 12 months of age and steers and spayed heifers of any age in a herd known to be affected but which is following an approved individual herd plan may move from any area into any area provided that the intact vaccinated heifers will be further identified with at least a 3/4" diameter hole in the left ear, unless such move is prohibited by the State Veterinarian of the receiving area.

1. Reactors and "B" branded exposed cattle--Reactors and "B" branded exposed cattle in herd depopulations shall remain on the premises where disclosed until a State or Federal permit for movement for immediate slaughter has been obtained. Movement for immediate slaughter must be to a recognized slaughtering establishment where Federal or State inspection is maintained, or to a Federal Specifically Approved Stockyard, or to a State approved livestock market for sale to such slaughtering establishment. In lieu of "B" branding, exposed cattle in a herd depopulation may be moved for immediate slaughter using official USDA backtag identification and either accompanied directly to slaughter by a Veterinary Services representative or a State representative or moved directly to slaughter in vehicles closed with official seals.
2. Exposed cattle--
 - a. All exposed cattle moving from a premises of origin or from a livestock market to a quarantined feedlot, or to a quarantined pasture, or to immediate slaughter shall remain on the premises where disclosed until an "S" brand permit for movement has been prepared. Movement to market for sale to a quarantined feedlot, quarantined pasture, or immediate slaughter must be through a Federal Specifically Approved Stockyard or through a State approved livestock market. Exceptions to the "S" branding and "S" brand permits are allowed for finished fed heifers moving directly to immediate slaughter at recognized slaughtering establishments and for exposed cattle where movement to slaughter does not require rail or motor carrier transportation.
 - b. Exposed cattle may move from the farm of origin or from Federal Specifically Approved Stockyards or State approved livestock markets directly to Federal or State inspected recognized slaughtering establishments in a sealed truck without permanent identification by "S" brand. The entire truckload of cattle or other susceptible species must be consigned to slaughter at a single slaughtering establishment. Mixed loads of slaughter, feeder, or breeding cattle are not to be included in such shipments. The entire load must be consigned directly to slaughter with no diversion to holding feedlots, pastures, or dealer pens. Truck seals are to be placed by State or Federal animal health personnel during regular work hours, or by accredited veterinarians. A permit as

defined in Part I, L, 1, with the appropriate seal number recorded on the permit, shall accompany each shipment. Cattle to be transported in sealed vehicles must remain on the premises until the appropriate animal health personnel or accredited veterinarian writes the permit and seals the vehicle. No postauthorized permits may be approved. Truck seals are to be broken by State or Federal animal health personnel during regular working hours, or by accredited veterinarians, or by a slaughtering establishment officer designated by Meat Inspection or by the State.

3. Untested test-eligible cattle--Untested test-eligible cattle of unknown status from Class B States or areas or Class C States or areas, which are being moved or sold, shall be identified and moved in the same manner as described for exposed cattle (see par. 2, above). Testing of test-eligible cattle is recommended in lieu of "S" branding.

If the consignor and the market operator agree in writing that they will be fully responsible to prevent contact or other exposure to non "S" branded cattle, such untested test-eligible "S" branded cattle may be moved to one additional market and then to a quarantined feedlot, or to a quarantined pasture, or to immediate slaughter. All such movements must be under "S" brand permit, provided the movement is permissible by State laws, rules, and regulations.

4. Suspects--Suspects which are being moved or sold shall be identified and moved in the same manner as described for exposed cattle (see par. 2, above) except a vaccinated suspect(s) at a livestock market in a consignment of otherwise negative cattle (where the suspect is card positive on the presumptive test and negative to the CF or rivanol test(s)) may move as follows:

In a single consignment of cattle, which are from a producer's herd of origin, the owner shall either return the vaccinated suspect(s) under quarantine to the herd of origin until the suspect(s) is negative to the card test, declared a stabilized suspect by a designated epidemiologist after subsequent test(s) conducted in not less than 30 days, or classified a reactor on a subsequent test; or sell the suspect(s) to a quarantined feedlot, quarantined pasture, or to

slaughter, identified with an "S" brand. Card negative cattle in this consignment may return to the herd of origin or move to another premises within the State or interstate with permit.

If the owner and the market operator agree in writing that they will be fully responsible to prevent contact or other exposure to non "S" branded cattle, such "S" branded cattle may be moved to one additional market and then to a quarantined feedlot, or to a quarantined pasture, or to immediate slaughter. All such movements must be under "S" brand permit, provided the movement is permissible by State laws, rules, and regulations.

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| N. Entering Premises | Persons engaged in the brucellosis eradication program shall be authorized under State authority to enter premises to carry out eradication procedures and shall practice such sanitary procedures so as to minimize the risk of physically transmitting the disease to other premises. |
| O. Services to Owner | Program services may be rendered without expense to the livestock owner; however, owners are to provide for handling of their cattle. Contracts with accredited veterinarians, nonprofessionals, other State and Federal agencies, or with the management of privately owned firms are to be used as needed to assist State and Federal animal health personnel accomplish necessary sample collections, animal identifications, and other activities. Within 3 days following notification of the results of an initial herd blood test, the owner may request an additional blood test on reactors at his expense provided such request is based on sound epidemiological evidence and provided all animals remain under herd quarantine. |
| P. Herd Depopulation | Herds with a high brucellosis infection rate or chronic infection of long duration shall be reviewed for possible depopulation with indemnity. All affected herds shall be reviewed for possible depopulation with indemnity in States which previously had been free of brucellosis, to reduce risk of further spread to other herds. |
| Q. Diagnostic Reagents for Brucellosis | Brucella antigens used for the diagnosis or detection of brucellosis in domestic livestock will be distributed only to animal health personnel and approved accredited veterinarians. |
| R. Whole Herd Vaccination Plan | Under this plan, the entire herd is to be blood tested followed by vaccination of the nonreacting cattle. Vaccination will be conducted within 10 days after completion of test and permanent identification, with removal of |

reactors from premises. A "whole herd vaccination" plan will not be used in Class Free States or areas without the approval of the State Veterinarian and the Deputy Administrator, Veterinary Services, Animal and Plant Health Inspection Service.

1. Affected Herds--In affected herds, the individual herd plan may include the use of whole herd vaccination in addition to other recognized procedures for control and elimination of the disease. All herd vaccination may be initiated only upon written permission of the State and Federal officials directly responsible for program activities in the State in which the herd is located. All animals so adult vaccinated shall be additionally identified by an open-ended "V" hot iron brand on the right jaw or high on the hip near the tailhead, or an official "AV" (adult vaccination) tattoo in the right ear. A first retest is recommended at 2 months or as early as possible following the whole herd vaccination in order to facilitate elimination of field strain infection. (See Part I, A, last sentence.)

Herds shall resume test and slaughter procedures no later than 6 months following the initial whole herd vaccination. Testing will be at intervals as agreed to in the individual herd plan. Adult vaccination in replacement animals which have passed a negative test within 10 days prior to entry may be used in a herd for a period not to exceed 48 months after initial whole herd vaccination.

Brucellosis affected adult vaccinated beef herds shall be released from quarantine on two negative tests, the first not less than 30 days following removal of all reactors and the second not less than 120 days following removal of the last reactor, as is currently provided in Part II, D, for release of quarantine in affected nonvaccinated herds. Such herd shall be considered negative if all animals in the herd show titers of less than +1 at 1:40 on the CF test or less than +25 on the rivanol test. An additional herd test is required not less than 6 months after release of a vaccinated herd or a nonvaccinated herd from quarantine. Permission for movement of cattle from such herds pending 6 months postquarantine retest is on a State-option basis. A post-sale retest on the cattle moving from previously quarantined "AV" herds before the 6 months retest shall be required between 120 and 180 days except animals may be tested as early as 45 days after movement if at the time at least 6 months have expired since the quarantine release of the herd of origin.

In all herd tests, a presumptive test shall be performed on each test-eligible animal. The card, and CF and/or rivanol tests shall be performed on all presumptive test positive animals. Animals positive to any of these tests, that are not identifiable as official vaccinates, shall be classified as reactors.

Official vaccinates positive on the card test or having a titer between +2 at 1:10 to +4 at 1:20 on the CF test in herds eligible for release from quarantine shall be classified as suspects and be quarantined individually (not the whole herd) until they are card negative and less than +2 at 1:10 on the CF test.

Dairy Herds--All of the foregoing shall apply to "AV" dairy herds. In addition, dairy herds shall either be negative to the last milk ring test or all individual lactating AV dairy animals shall have less than a 1:16 titer by the milk ring test on individual samples of all quarters prior to release from quarantine. Any "AV" dairy herd released from quarantine which continues to be suspicious on milk ring test surveillance shall be evaluated by the designated epidemiologist and monitored with further testing as necessary to ensure that there is no evidence of field strain brucella infection in the herd.

2. Herds Which are not Certified Brucellosis-Free--
Persons owning herds at high risk of becoming infected with brucellosis which are not Certified Brucellosis-Free may also request "whole herd vaccination." The individual herd plan may then include the use of "whole herd vaccination" in addition to other recognized procedures for control and elimination of the disease. All eligible calves shall also be calfhood vaccinated and identified. "Whole herd vaccination" may be initiated only upon written permission of the State and Federal officials directly responsible for program activities in the State in which the herd is located. All animals so vaccinated shall be identified in addition to an official eartag by an open-ended "V" hot iron brand on the right jaw or high on the hip near the tailhead, or an official "AV" (adult vaccination) tattoo in the right ear. Following vaccination, only the adult vaccinated cattle will be placed under quarantine. Herds shall resume test no later than 6 months following the initial "whole herd vaccination" (except as provided by Part II, W, Deadline Exceptions). After vaccination, standard card test negative animals from herds not known to be affected may move without restriction provided they meet intrastate and interstate

requirements and were negative at the time of vaccination. The herd will be eligible for release from quarantine with a negative test 120 days or more following vaccination.

Dairy Herds--All of the foregoing shall apply to "AV" dairy herds. In addition, dairy herds shall either be negative to the last milk ring test or all individual lactating AV dairy animals shall have less than a 1:16 titer by the milk ring test on individual samples of all quarters prior to release from quarantine. Any "AV" dairy herd released from quarantine which continues to be suspicious on milk ring test surveillance shall be evaluated by the designated epidemiologist and monitored with further testing as necessary to ensure that there is no evidence of field strain brucella infection in the herd.

3. Certified Brucellosis-Free Herds--Under this plan, owners of Certified Brucellosis-Free Herds in an area of high risk of becoming infected with brucellosis may request "whole herd vaccination." The purpose will be to establish an immediate high level of resistance to the present or expected exposure from field strain Brucella abortus. Such procedures may be initiated only upon written permission of State and Federal officials directly responsible for program activities in the State in which the herd is located.

In herds of known status; i.e., Certified Brucellosis-Free Herds, the individual herd plan may include the following "whole herd vaccination" procedures in addition to other recognized procedures for prevention or control of the disease:

- a. A blood sample shall be obtained from all test-eligible cattle for serologic testing. If all tests are negative, continue to treat as a Certified Brucellosis-Free Herd at high risk, but if any cattle are reactors, treat the herd as an affected herd and follow the same rules as for known affected herds. (Par. 1, Affected Herds).
- b. In Certified Brucellosis-Free Herds with negative serologic tests, but at high risk, all eligible calves shall be calfhood vaccinated and identified. Within 10 days after serologic testing, all other female cattle shall be vaccinated with a reduced dose of Strain 19 vaccine and identified with an official "AV" (adult vaccination) tattoo in the right ear as

well as the permanent individual official metal eartag. Following vaccination, only the adult vaccinated cattle will be placed under quarantine. Included in the individual herd plan shall be provisions for the herd to be tested within 30 to 120 days following vaccination, and at not less than 30-day intervals thereafter, until a negative test conducted at least 90 days later than the first negative test 30 days or longer after the last reactor if any, is removed qualifies to release the quarantine. Certified Brucellosis-Free Herd status is suspended while the herd remains under quarantine and is reinstated upon release from quarantine provided field strain Brucella abortus infection has not been diagnosed in the herd. During such period of quarantine, card test negative adult vaccinated cattle in these Certified Brucellosis-Free Herds may move without restriction.

Dairy Herds--All of the foregoing shall apply to "AV" dairy herds. In addition, dairy herds shall either be negative to the last milk ring test or all individual lactating AV dairy animals shall have less than a 1:16 titer by the milk ring test on individual samples of all quarters prior to release from quarantine. Any "AV" dairy herd released from quarantine which continues to be suspicious on milk ring test surveillance shall be evaluated by the designated epidemiologist and monitored with further testing as necessary to ensure that there is no evidence of field strain brucella infection in the herd.

S. Epidemiologic Services

The Brucellosis Eradication Program shall furnish quality epidemiologic services to aid veterinarians and herd owners in brucellosis prevention and control leading toward local eradication. To accomplish this goal, the following epidemiologic-related service shall be instituted:

1. State and federally employed veterinarians having brucellosis program responsibilities shall attend an APHIS brucellosis epidemiology short course or its equivalent within the first year of their assignment. Those currently employed and assigned to this program should also receive this training at the earliest possible date. They shall attend updating courses annually.
2. Accredited veterinarians performing official brucellosis work shall be required to participate in

a structured program of continuing education on program elements. At least once during each 3-year period following the initial program they shall attend an updating course on program elements.

3. State livestock inspectors and APHIS animal health technicians shall be required to participate in a structured program of continuing education on program elements. They shall attend updating courses annually.
4. Each State brucellosis program supervisor shall notify the State public health agency at the time, or within 15 days, of the imposition of each herd quarantined for brucellosis. The public health agency will be requested to mail an educational letter to the owners of quarantined herds.
5. Each State should require an educational statement on brucellosis:
 - a. be given to buyers/sellers at the time of change of ownership of cattle:
 - (1) to create an awareness that brucellosis is a contagious disease;
 - (2) to reduce the risk of buying/selling brucellosis-infected cattle;
 - (3) to encourage postpurchase testing of cattle 45-120 days after change of ownership;
 - (4) to encourage owners to vaccinate calves;
 - (5) to motivate buyers/sellers to take positive actions to prevent the spread of brucellosis.
 - b. be designed to meet varying conditions on a State-by-State or regional basis according to the needs for effective education;
 - c. be written in plain English and have the approval of the responsible State-Federal officials;
 - d. be printed in large, easily readable type on paper which is a contrasting color that will attract the attention of buyers/sellers;

- e. become a part of the necessary papers involved in any livestock transaction such as brand release, bill of sale, health certificate, etc., with copies for both buyer and seller.

Example follows:

BRUCELLOSIS IS A CONTAGIOUS DISEASE

Learn How to Reduce Your Risk of Buying
Brucellosis-Infected Cattle

\$SAVE DOLLAR\$--READ THIS

BRUCELLOSIS-exposed cattle may be blood test negative at the time of sale because they are in the incubation stage of infection and still developing into blood test reactors.

TO REDUCE RISKS of spreading disease from cattle that are in the incubatory stages of brucellosis at the time of sale AND TO SAVE DOLLARS, follow these recommendations:

1. Ask the seller to give you information on the BRUCELLOSIS status of the herd or herds of origin of any cattle you purchase.
2. Take appropriate precautions to protect these cattle from exposure to BRUCELLOSIS while in your ownership.
3. Have postpurchase blood test for BRUCELLOSIS conducted between 45 and 120 days following purchase to check for previously incubating infection.
4. If the blood tests indicate BRUCELLOSIS, request your Doctor of Veterinary Medicine (D.V.M.) and a D.V.M. from the State animal health agency to evaluate the situation and provide assistance to save you dollars that otherwise could be lost.

FOR FURTHER INFORMATION

CALL Telephone Number 000-000-0000

Name and Address of State Animal Health Agency

INCREASE PROTECTION WITH VACCINATION

Vaccination with Strain 19 Brucella abortus vaccine is recommended to increase protection for calves that may be sold or exposed to BRUCELLOSIS in the future.

T. Individual Herd Plan

A plan for the elimination of brucellosis from each affected herd shall be developed by the herd owner (and his veterinarian if so requested by the owner) and a veterinarian of the Cooperating Brucellosis Eradication Program. The plan shall be formalized as a Memorandum of Agreement between the owner and the animal health official. With the provision that the plan may be reevaluated and changed, as agreed to by all parties concerned, it shall be the responsibility of all parties to the agreement to adhere to the plan throughout the period of eradication of the disease from this herd.

The plan should be developed to reduce and then eliminate brucellosis within the herd, to prevent spread to others, and to prevent reintroduction of brucellosis after this herd has become free of the disease. Developers of the plan should consider: the classification of the State in which the herd is located, the risk of spread to other herds of cattle (potential "off-site costs" to other herd owners and society), the amount of infection and possible exposure within the affected herd, the type of cattle operation, and the conditions affecting the economics and management of the herd as they relate to control and local eradication procedures. The developers should prepare a written plan that will be epidemiologically sound in terms of this particular individual herd. It would include such items as testing schedules, herd health management practices, procedures to govern preparturient and parturient cows, the exit or entry of cattle into the herd, identification of cattle, sanitation practices, the use of Strain 19 B. abortus vaccine, and other appropriate preventive practices. Vaccination of calves should be discussed with the owner and recommended for calves in high-risk areas or that may be sold into high-risk areas. In special situations, "whole herd vaccination" may be recommended with concurrence of appropriate State and Federal officials.

When suspects are found in herds which are not Certified Brucellosis-Free, or in Certified Brucellosis-Free herds,

a similar individual herd plan should be initiated. This plan should include testing schedules and management plans that will minimize spread of brucellosis within the herd or to other herds.

U. Dealer
Registration and
Recordkeeping

Any dealer who purchases, deals in, or sells cattle; or who acts as a commission representative or broker; or who operates and conducts an auction where cattle are sold must be registered or licensed with the appropriate State agency and maintain required records which will facilitate traceback of exposed and/or reactor animals by State authorities to the herd of origin or other point of original infection.

1. Dealer registration--The State agency shall have authority, after due notice and opportunity for hearing to the individual or firm involved, to deny an application for registration, suspend or cancel the registration when the agency is satisfied of one or more of the following:
 - a. there is adequate evidence to establish intent to violate or circumvent recordkeeping requirements of this section and/or other animal health regulations;
 - b. there is a demonstrated history of repeated inability to trace back to the point of origin those exposed or reactor animals handled by the dealer.
2. Records required--Each registered or licensed person, firm or corporation shall keep sufficient records, for a minimum of 2 years, of all test-eligible animals purchased for resale to enable the State agency to satisfactorily trace back such animals to their herd of origin.
3. Violations; Remedies--Provisions shall exist for State animal health officials to institute such action at law or in equity as may appear necessary to enforce compliance with any provision of this Part. This shall include the authority to subpoena persons and/or records in violation of these minimum standards as well as authority for the appropriate State officials to petition the local court having venue for an order to enforce such subpoenas.

A brand law or regulation which accomplishes the traceback purposes of Section U of this section will

be considered an acceptable alternative. Acceptance of this alternative will be based on an overall review of the provisions and accomplishments of the State program in achieving the effective traceback of all exposed and/or reactor animals to the herd of origin or other point of original infection.

- V. Administrative Review An administrative review of a State's brucellosis program may involve any of the following:
1. receipt and examination of routine written monthly, annual, and other statistical and narrative reports;
 2. examination of the outcome of existing State policies and procedures for the control and eradication of brucellosis as judged by the prevalence of infection;
 3. special reports prepared in response to specific requests regarding the authorities and the policies for implementing the various minimum standards of the UM&R;
 4. station visits by regional directors, regional epidemiologists and by staff personnel to observe program procedures and to make general or specific purpose program evaluations; and/or
 5. station evaluation teams comprised of several individuals representing State, Federal, and/or industry and academic interests appointed to make limited or comprehensive reviews of the brucellosis program.
- W. Deadline Exceptions Herd plan, investigation, and test deadlines as specified in Part(s) V, VI, VII and VIII shall be followed except when a designated brucellosis epidemiologist determines that extenuating circumstances exist. The extenuating circumstances shall be such as to make the deadline established for a particular herd impossible to meet. A new deadline must be established at the time of this decision to accomplish the required testing at the earliest opportunity. New deadlines established must be consistent with brucellosis eradication principles.
- X. Milk Ring Test Adjustments Adjustments to increase the sensitivity of the BRT are necessary to compensate for the dilution factor in composite milk samples from large dairy herds. By increasing the sensitivity of the BRT, the likelihood of detecting brucellosis recently introduced or maintained in chronic carrier animals is increased.

The desired sensitivity of the BRT is determined by the approximate number of cows represented in the composite herd milk sample.

1. Approximate herd size can be estimated by:
 - a. Dividing the average milk production per cow in the State into the total pounds of milk received by the dairy processing plant from each herd; or
 - b. Recent official blood test record of herd subtracting current estimated number of nonlactating animals.
2. Use fresh milk samples from herds milking 150 or more cows.
3. Adjust BRT milk sample volume to herd size.

Number lactating animals	Test sample
up to 150	1 ml. of milk
151-450	2 ml. of milk
451-700	3 ml. of milk

In herds with more than 700 lactating cows, segment the herd into subunits (25 to 75) and collect composite milk samples from each subunit from the pipeline.

4. Add 0.1 ml. of negative cream (4-6 drops) to each BRT tube regardless of volume of milk used. The negative cream must be obtained from a herd sample representing milk from at least 50 cows to avoid individual difference in creaming quality.
5. Add 1 drop of BRT antigen per test regardless of milk volume.
6. Interpret test results as positive or negative. In the standard 1 ml. ring test, the blue color of the cream layer should be at least as dark as the skim portion of the milk to be considered positive. Only those tubes showing a blue ring darker than the skim milk should be interpreted as positive for the 2 ml. and 3 ml. tests.

Y. Identifi-
cation of
Spayed
Heifers

Spayed heifers may be officially identified by applying a hot iron brand to either or both jaws using an open spade design, as used in playing cards (♠), of not less than 3 inches high.

PART III

Participation in Herd or Area Certification Plans

- A. Obtaining Initial Certification Status To obtain initial Certified Brucellosis-Free Herd status or area status, the herds or area must use one or more of the accepted methods listed in Parts IV, V, VI, VII, or VIII for qualifying the herds or area and must meet all of the qualifying standards given under Parts IV, V, VI, VII, VIII.
- B. Maintaining Certification Status State and Federal officials in charge of program activities in each State are responsible for conducting a continuous evaluation of the efficiency of local procedures for locating and eliminating infected cattle. The minimum standards as described for each plan in Parts IV, V, VI, VII, or VIII, Brucellosis Eradication Uniform Methods and Rules, must be met or exceeded throughout the certification period to maintain continuous status. A review committee including representatives from States, universities, and industry will evaluate each State's brucellosis program as needed, but at least once each 3 years. An annual report showing the degree of uniformity and adequacy of the surveillance measures, suspicious and affected herds disclosed, infected rates, and adequacy of program standards within the area, is required to maintain certification. The annual report content and format is available in Veterinary Services Memorandum No. 551.4, which is revised as needed.
- C. Terminating Certification Status Herd or area certification status may be terminated at any time during the period with 10 days' notice if the herd or area does not maintain adequate surveillance measures including adjacent and epidemiological tracing measures or fails to comply with quarantine requirements, with testing schedules, with initial testing schedules for suspicious herds detected by the surveillance measures including those herds designated as adjacent herds and epidemiologically traced herds (see Part II, G), has excessive herd infection rates, or improperly disposes of reactors or exposed animals. If legal action against the livestock owner has been initiated by States' attorneys and is in progress, termination of status may not be considered necessary.
- D. Reinstatement of Certification Status When herds or areas lose certification status because of deficiencies in levels of surveillance or in procedures necessary for locating affected herds, controlling infected and exposed animals, and eliminating infected animals as prescribed under the various plans and procedures, the certification status may be reinstated upon presentation of sufficient evidence showing that the deficiencies have been corrected. Areas in which the deficiencies have not been corrected within 6 months of the termination of the status must qualify as for initial certification.

E. Federal
Quarantines
Within
Class A
States

Within Class "A" States, provisions will be made for State-Federal quarantines of circumscribed areas of population without loss or denial of Class "A" status for the State.

1. Exception--Exception to standards for States to qualify for Class A status and exception to standards to maintain Class A status are as follows:
 - a. The Chairman of the United States Animal Health Association (USAHA) Brucellosis Committee may appoint a committee of five members to review an application from cooperating State and Federal animal health officials for retention of status as Class A, or advancement to that status when data indicates that State has an area that no longer qualifies as Class A or does not qualify for advancement to Class A status.
 - b. No State may have more than two such areas.
 - c. All members appointed to the committee shall be knowledgeable about brucellosis.
 - d. Members shall represent one of each category: the cattle industry, a university, a State and a Federal animal health official from two nonadjacent States, and a representative of the USAHA Brucellosis Committee.
 - e. No members shall be residents of the State making the application.
 - f. The committee, after review of the application and interview of witnesses, as may be deemed necessary, shall recommend approval or disapproval to USDA.
2. Format for application for exception--States making a request for exception will prepare a cooperative State-Federal agreement. This agreement will include the following specific issues and define the responsibility of each agency:
 - a. The procedures and responsibilities for placement and enforcement of quarantines both on the area and herds within.
 - b. The procedures to permit movement for specific purposes both within the defined area and from the defined area.

- c. The legal description of geographic boundaries of the areas to be quarantined.
- d. The specific time period for elimination of all foci of infection.

3. Requirements for submission of application--

- a. The application shall be accompanied by evidence that the majority of the industry members involved in the area participated in development of the proposed plan, and are aware of the restrictions it will require, and will assist in monitoring and enforcing the plan.
- b. Prior to submission, the State shall be certain it provides for movements to slaughter, identified with "B" or "S" brand under permit (VS Form 1-27 or equivalent) or for other purposes with a certificate showing a negative test on each animal covered within 30 days of movement.
- c. Appropriate legal authority and adequate funding must be available.
- d. The application shall not be for areas larger than two counties with clearly defined boundaries providing geographic barriers compatible with monitoring and restricting movement of cattle from and into the area.
- e. The time period to eliminate all foci of infection shall be no longer than 2 years.

4. Monitoring and Reporting--

- a. Semiannual progress reports shall be submitted to VS.
- b. The reports shall be reviewed and forwarded to committee members together with appropriate comments.
- c. The committee may request additional reports at more frequent intervals and/or more detail on some components of the report.

5. Termination--

- a. The area will be terminated and restored or advanced to Class A status when all requirements for Class A have been met.

- b. The area may be terminated and the entire State reclassified as Class B at any time the review committee recommends such action, or at the expiration of the time period approved by the committee.

F. Two Areas
in a
State

The USAHA Advisory Committee will assure the following specific criteria will be met as conditions of a recommendation for approval of two area classifications within a State;

1. Regulatory authority--Regulatory authority exists to maintain separate areas within the State.
2. Legislative authority--Legislative authority for maintaining separate areas within the State will be available.
3. Resources--Commitment of resources to maintain separate areas.
4. Method--Creditable method for constraint on movement of animals across the boundary.

PART IV
Certified Brucellosis-Free Herds of Cattle

- A. Qualifying Methods
- A herd may qualify by one or more of the following methods:
1. Milk Ring Test (BRT)

Initial certification: A minimum of four consecutive negative milk ring tests conducted at not less than 90-day intervals, followed by a negative herd blood test conducted within 90 days after the last negative milk ring test.

Recertification: Milk ring test procedures are not used for herd recertification.
 2. Complete herd blood test

Initial certification: At least two consecutive negative blood tests of all test-eligible cattle not less than 10 months nor more than 14 months apart. Additional herd blood tests may be conducted if the owner so desires or if the certifying agencies deem it necessary.

Recertification: A negative herd blood test of all test-eligible cattle conducted within 60 days of each anniversary date is required for continuous certification. If the certification test is conducted within 60 days following the anniversary date, the certification period will be 12 months from the anniversary and not 12 months from the date of recertifying test. If a herd blood test for recertification is not conducted within 60 days following the anniversary date, then certification requirements are the same for initial certification.
 3. Purchase of a Certified Free Herd
 - a. No negative herd blood test is required when the cattle remain on the premises. A new certificate will be issued in the owner's name. The anniversary date and the herd number will remain the same.
 - b. All or part of a Certified Free Herd purchased and moved directly to premises without other cattle may qualify without a test. A new certification number will be issued. The anniversary date of the new herd is established by the test date of the herd of origin or by a new herd test of the purchased cattle.
- B. Qualifying Methods
1. Size of area--Herd basis including all offspring
 2. Length of status--12 months

3. Testing period

Initial certification: 10 to 14 months (minimum of 9 months if BRT is used).

Recertification: A negative blood test of all test-eligible cattle is to be conducted within 10 to 14 months of the last certification date for continuous status.

4. Herd infection rates--The individual herd must disclose no evidence of infection at the time of initial certification or recertification.

5. Animal infection rates--The individual animals must disclose no evidence of infection at the time of initial certification or recertification.

6. Suspects--When suspects (Part I, B) are disclosed, an individual herd plan shall be developed for the future testing of the suspect(s) and the handling of the herd as described in Part II, T. This plan may range from a quarantine of the entire herd to a single retest of the suspect using the appropriate tests in Part II, I, Classification of Cattle.

7. Herd status, if infection occurs--When one or more reactors are disclosed in a certified herd or in a herd under test for initial certification, it shall be considered affected and the quarantine and retest provisions in Part II, D and E, shall apply.

Initial certification: A herd qualifies for initial Certified Brucellosis-Free Herd status when free of infection, all provisions for release of quarantine have been met, and the additional provisions required under Part IV, A, 1 and 2, have been met. A negative blood test and a complete epidemiological investigation may be used to resolve a suspicious BRT in qualifying a herd.

Recertification: If a retest of a Certified Herd or of animals from such a herd reveals only one reactor, the certification status will be suspended until all provisions for release of quarantine have been met. If more than one reactor is disclosed, the herd certification will be terminated until all provisions for release of quarantine have been met and the additional provisions for initial Certified Brucellosis-Free Herd status required under Part IV, A, 1 and 2, have been met.

Herd retests for quarantine release and to fulfill the provisions required under Part IV, A, 1 and 2, may be conducted concurrently.

8. Movement of Cattle into a Certified Brucellosis-Free Herd

- a. From quarantined feedlots--No animal consigned to a quarantined feedlot may be maintained in association with a Certified Brucellosis-Free Herd.
- b. From other feedlots--Animals consigned to feedlots other than quarantined feedlots may be held on premises with a Certified Brucellosis-Free Herd, provided these cattle meet the blood testing requirements prior to entry into the feedlot and there is no contact with the Certified Brucellosis-Free Herd.
- c. From Certified Brucellosis-Free Herds or Class Free States or Areas--No test requirements on breeding or dairy cattle originating from Certified Brucellosis-Free Herds or Class Free States or Areas. Animals added to a Certified Brucellosis-Free Herd under this provision shall not receive new herd status for sale purposes until they have passed a 60-120 day postentry retest.
- d. From Class A, B, or C Areas or States--Test-eligible cattle from herds not under quarantine must be blood tested negative for brucellosis within 30 days prior to the date of being moved. In addition, all other requirements for interstate or intrastate movement must be met. A 60-120 day postentry retest is required for all cattle purchased from noncertified free herds. Animals added to a Certified Free Herd under this provision shall not receive new herd status for sale purposes until they have passed a 60-120 day postentry retest and have been included in an anniversary herd test.

9. Proof of Qualifying as a Certified Brucellosis-Free Herd

- a. Initially a certificate will be issued.
- b. Recertification will be done by a renewal certificate showing only the certified free herd number, number of animals, and owner.

PART V
Class Free Status

Introduction: Under movement requirements for cattle from nonquarantined herds in all classes of States, the following cattle are specifically exempt from "testing for movement requirements" by definition in Part I, D, 2, b, and 3, Test-eligible cattle: cattle under 18 months of age (as evidenced by the presence of the first pair of temporary incisor teeth); steers and spayed heifers; official calfhooD vaccinates of the dairy breeds under 20 months of age unless they are heavy springers or have calved; official calfhooD vaccinates of the beef breeds under 24 months of age (as evidenced by the absence of the first permanent incisor teeth) unless they are heavy springers or have calved; cattle moving directly to slaughter; and cattle moving directly from certified herds. Movement requirements for other cattle under this classification are in this Part under paragraph "D".

A. Size of Area Usually an entire State. A State may request a two-area classification.

The following specific criteria will be met as the conditions of a recommendation for approval of two-area classification within a State:

1. Legislative authority exists for maintaining separate areas within the State.
2. Regulatory authority exists to maintain separate areas within the State.
3. Resources exist and have been committed to maintain separate areas.
4. A creditable method for controlling the movements of animals across the boundary has been demonstrated. APHIS will review the procedures with the requesting State.

B. Length of Classification Indefinite. However, Free status is automatically suspended upon disclosure of field strain infection except when the field strain infection was found to be imported and no spread of brucellosis occurred to other herds prior to the immediate destruction or return of the exposed animals. States shall document program status by a 12-month special (annual) report. The special report shall disclose the following information:

1. Herd and cattle population at risk and the source of this information;
2. Dates of period reported;

3. Number of BRT rounds;
4. Number of MCI tests; (report slaughter MCI and all other MCI separately);
5. Number of MCI reactors;
6. Number of MCI reactors traced by category such as - to herd of origin and tested with reactors; to herd of origin and tested with negative results; to out-of-State origins; to known infected herds;
7. Number eligible cattle slaughtered and number of testable blood samples collected;
8. Number of herds infected with field strain B. abortus during reporting period;
9. Number and results of blood testing in other species of domestic animals;

(Items 1 through 9 are to be reported on revised VS Form 4-1, application for status. Almost all information is available on VS Form 4-33D, Monthly Report of Brucellosis Eradication Activities, on file in each State.)

10. A narrative description of epidemiologic surveillance investigations and results; MCI investigations and results including number unable to trace due to lack of manmade identification; discussion for each slaughter establishment failing to collect 95 percent blood samples from eligible cattle; specific adherence to other UM&R standards.

Special reports disclosing apparent deficiencies shall be reviewed by VS and State officials to determine the correct status for the State. Special reports may cover any 12 consecutive months; however, no months may be unreported. A State may request advancement at any time the 12 month special report meets the requirements for Class Free status. All cattle herds in which brucellosis has been known to exist must be legally released from quarantine prior to classification. In addition, all herds of other species of domestic livestock in which brucellosis has been found or suspected must be tested negative, slaughtered, or quarantined, leaving no known foci of infection in any species uncontrolled at the time of classification.

C. Standards
to Attain
and Maintain
Class Free
Status

1. Surveillance

- a. Milk Ring Test (BRT) - The milk ring test shall be conducted at least four times per year at approximately equal intervals. An epidemiologic investigation of all herds with suspicious milk ring test results shall be conducted and an approved action plan developed within 15 days of the laboratory test date. Initial herd blood tests of the entire test-eligible herd should be completed within 30 days of the laboratory test date. Loss of Class Free status may occur if the herd test is not conducted on time.

Patron lists shall be reviewed to ensure that all dairy herds producing commercial milk have been included in at least three of the four BRT rounds per year. The quality of the samples used for the milk ring test will be monitored at the time of collection. The milk ring test procedure will be adjusted in accordance with herd size. (See Part II, X.)

b. Market Cattle Identification Program (MCI)

- (1) Coverage - All State or federally inspected slaughtering establishments must participate in the Market Cattle Identification program. The rate of sampling of test-eligible market cattle shall be at least 95 percent at each State or federally inspected slaughtering establishment. In cases where the 12-month collection rate is below 95 percent for specific plants, the actions taken to correct the existing situation will be evaluated in determining status. Manmade identification (except brands and tattoos) on test-eligible cattle at time of slaughter are to be collected and shall accompany the blood sample to the laboratory. Failure to collect such identification hampers the positive identification of many market cattle reactors. If the failure to trace reactors to the herd of origin is related to the lack of collection of various manmade identification, the MCI program will be considered deficient in the State where the blood is collected.

- (2) Reactors - At least 90 percent of market cattle reactors during each 12-month period must be traced to herd of origin and an investigation conducted as outlined in Part I, S, 2, b, within

15 days of official notification. In States with 20 or fewer MCI reactors, a special review may be made of justification for failure to meet tracing of 90 percent of reactors to herd of origin. When a herd blood test is indicated, it should be conducted within 30 days of official notification of market cattle test reactors or the herds are to continue to be confined to the premises under quarantine. (For exceptions see Part II, W.) Loss of status will occur if the herds of origin of rivanol or CF test positive market cattle reactors are considered suspicious after a complete epidemiologic investigation and are not tested within 6 months of official notification of the market cattle reactor.

- (3) Reporting results - All MCI reactors originating in the reporting State, including the successful and unsuccessful tracebacks and blood tests of the herds of origin, are to be reported in the annual report to maintain status. The data summarizing the successful and unsuccessful tracebacks for cattle with backtags and for cattle without backtags should be presented separately.

c. Epidemiologic Surveillance

- (1) Adjacent herds - All adjacent herds or other herds having contact with imported cattle containing a reactor(s) shall have an approved action plan for testing or monitoring the herd(s). Such plans must be in effect within 15 days of disclosure of reactors in the index herd and include at least two herd tests with the last herd test approximately 6 months after the index herd is depopulated or freed of infection. (For exceptions see Part II, W.) If disagreement occurs regarding the necessity for testing a herd, consultation among the herd owner, the chief State animal health official or his representative, the epidemiologist and the herd owner's veterinarian, if requested, will be held to resolve the situation.
- (2) Epidemiologically traced herds - All herds found by epidemiological tracing to have sold cattle into an infected herd and all herds found by the same means to have received cattle from an infected herd should be placed under quarantine

and must have an action plan for testing or monitoring the herd. Such plans must be in effect within 15 days of locating the source or recipient herds and any testing required should be performed within 30 days of disclosure of herd association. (For exceptions see Part II, W.) If disagreement occurs regarding the necessity for testing a herd, consultation among the herd owner, the chief State animal health official or his representative, the epidemiologist and the herd owner's veterinarian, if requested, will be held to resolve the situation.

2. Herd Infection Rate

- a. States must remain free from field strain B. abortus infections for 12 months or longer. If reactor animals are disclosed in an imported lot of cattle and no spread of brucellosis has occurred to other herds prior to the immediate destruction or return of the exposed animals, the entire lot can be depopulated or returned to the State of origin without loss of status. Infections are assumed to be caused by a field strain until veterinary officials in the State show otherwise by culture or by a complete epidemiologic investigation that excludes field strain infection.
- b. A complete epidemiologic investigation with appropriate test of adjacent and contact herds will be conducted on any herds of origin of MCI reactors in which all test-eligible cattle have been eliminated by slaughter. Should this investigation indicate the presence of field strain infection prior to the slaughter of the herd, the herd will be designated infected and the area will be reclassified as a Class A area.
- c. An epidemiologic investigation of each herd with reactor cattle shall be conducted within 15 days to identify the potential sources of infection. All potential sources shall be contacted to determine appropriate action within 15 days. Extenuating circumstances causing delays in contacting potential source herds must be documented in the case report submitted to Veterinary Services, Hyattsville, Maryland.

3. MCI Reactor Prevalence Rate

States should maintain a 12-month adjusted MCI reactor prevalence rate not to exceed one reactor per 2,000 cattle tested (0.050 percent). The adjusted MCI reactor prevalence rate is calculated by deleting from the numerator the market cattle reactors originating from known reactor herds, market cattle reactors traced to out-of-State origins, and market cattle reactors originating from herds of origin in which all test-eligible cattle were subsequently tested and found negative for brucellosis. A complete epidemiologic investigation with appropriate test of adjacent and contact herds will be conducted on any herds of origin of MCI reactors in which all test-eligible cattle have been eliminated by slaughter. Should this investigation indicate that this herd was infected with field strain brucella, the herd will be designated infected and the MCI reactors traced to this herd may be deleted from the numerator in determining the MCI Reactor Prevalence Rate. Should such an investigation indicate no field strain infection has occurred, the MCI reactors will be included in determining the MCI Reactor Prevalence Rate. Extenuating circumstances causing the rate to be above the stated rate must be documented in the annual report.

4. Uniform Methods and Rules Compliance

- (a) States must maintain effective implementation of UM&R requirements as judged by administrative review and epidemiologic evaluation.
- (b) Failure to maintain minimum procedural standards as defined in the UM&R may be cause to reclassify the State to Class A status. Prior to reduction of status the State may request a peer group review (Part II, V, 5) at their expense. The State and Federal officials in charge of program activities will be notified in writing of any apparent deficiencies that may affect the status of the State classification. The State and Federal officials in charge of the program activities will determine and describe in writing the corrective actions to be taken. The response must include a schedule for making any needed corrective actions. Herd infection in other than quarantined imports due to field strains of brucella or excessive adjusted market cattle reactor rates will be cause for immediate loss of Class Free status and result in reclassification of the State to Class A status. Class Free status

may be regained by qualifying as for initial Class Free status or, if appropriate, when all deficiencies causing the loss of status have been corrected and a minimum of 6 months have elapsed demonstrating the effectiveness of the corrective action(s).

D. Movement
of Cattle
on Change
of Owner-
ship Within
and From
Class Free
States or
Areas for
the Follow-
ing Purposes

1. Feeding

- a. Interstate movement into quarantined feedlots or quarantined pastures. Intrastate movements are not applicable because such premises are not recognized in Class Free States.
 - (1) Exposed cattle from quarantined herds, except steers and spayed heifers, must be "S" hot iron branded before movement. An "S" brand permit is required for such movement.
 - (2) Test-eligible cattle from other herds, including Certified Brucellosis-Free Herds, may move to quarantined feedlots in other States without test restrictions but a certificate (Part I, BB) is required.
- b. Movement into other feedlots (Inter or Intrastate) - Requirements are the same as for breeding cattle.

2. Immediate slaughter (Inter or Intrastate)

- a. Exposed animals from a quarantined herd must be "S" hot iron branded, "B" hot iron branded if the herd is being depopulated with indemnity, or moved in sealed vehicles directly to slaughter. A VS Form 1-27 is required.
- b. Other cattle may move to slaughtering establishments or to markets for sale for immediate slaughter without test restrictions if identity to source is maintained.

3. Breeding cattle (Inter or Intrastate)

- a. A certificate is required for interstate movements but there are no premovement test requirements. A voluntary test between 45 and 120 days postmovement is recommended following interstate movement.
- b. It is recommended that all female breeding stock moving interstate be calfhood vaccinated.

Female dairy cattle which are born after January 1, 1984, and are 4 months of age and over must be official vaccinates if moved into or out of a Class B State or area unless they are moved directly to a recognized slaughtering establishment or to a quarantined feedlot.

All female cattle which are born after January 1, 1984, and are 4 months of age and over must be official vaccinates if moved into or out of a Class C State or area unless they are moved directly to a recognized slaughtering establishment or to a quarantined feedlot.

Female cattle eligible for official calfhood vaccination and required to be officially vaccinated may be moved interstate directly to a specifically approved stockyard and be officially vaccinated upon arrival at the specifically approved stockyard.

PART VI
Class A Status

Introduction: Under movement requirements for cattle from nonquarantined herds in all classes of States, the following cattle are specifically exempt from "testing for movement requirements" by definition in Part I, D, 2, b, and 3, Test-eligible cattle: cattle under 18 months of age (as evidenced by the presence of the first pair of temporary incisor teeth); steers and spayed heifers; official calfhood vaccinates of the dairy breeds under 20 months of age unless they are heavy springers or have calved; official calfhood vaccinates of the beef breeds under 24 months of age (as evidenced by the absence of the first pair of permanent incisor teeth) unless they are heavy springers or have calved; cattle moving directly to slaughter; and cattle moving directly from certified herds. Movement requirements for other cattle under this classification are in this Part under paragraph "D."

A. Size of Area Usually an entire State. A State may request a two-area classification. Additionally, Part III, E, provides for Federal quarantines within a State:

The following specific criteria will be met as the conditions of a recommendation for approval of two-area classification within a State;

1. Legislative authority exists for maintaining separate areas within the State.
2. Regulatory authority exists to maintain separate areas within the State.
3. Resources exist and have been committed to maintain separate areas.
4. A creditable method for controlling the movements of animals across the boundary has been demonstrated. Animal and Plant Health Inspection Service will review the procedures with the requesting State.

B. Length of Classification Indefinite. States shall document program status by a 12-month special (annual) report. The special report shall disclose the following information:

1. Herd and cattle population at risk and the source of this information;
2. Dates of period reported;
3. Number of BRT rounds;

4. Number of MCI tests (report slaughter MCI and all other MCI separately);
5. Number of MCI reactors;
6. Number of MCI reactors traced by category such as - to herd of origin and tested with reactors; to herd of origin and tested with negative results; to out-of-State origins; to known infected herds;
7. Number eligible cattle slaughtered and number of testable blood samples collected;
8. Number of herds infected with field strain B. abortus during reporting period;
9. Number and results of blood testing in other species of domestic animals.

(Items 1 through 9 are to be reported on revised VS Form 4-1, application for status. Almost all information is available on VS Form 4-33D, Monthly Report of Brucellosis Eradication Activities, on file in each State.)

10. A narrative description of epidemiologic surveillance investigations and results; MCI investigations and results including number unable to trace due to lack of manmade identification; discussion for each slaughter establishment failing to collect 95 percent blood samples from eligible cattle; specific adherence to other UM&R standards.

Special reports disclosing apparent deficiencies shall be reviewed by VS and State officials to determine the correct status for the State. Special reports may cover any 12 consecutive months; however, no months may be unreported. A State may request advancement at any time the 12-month special report meets the requirements for the higher class.

C. Standards
to Attain
and Maintain
Class A Status

1. Surveillance

- a. Milk Ring Test (BRT) - The milk ring test shall be conducted at least four times per year at approximately equal intervals. An epidemiologic investigation of all herds with suspicious milk ring test results shall be conducted and an approved action plan developed within 15 days of the laboratory test date. When required the initial herd blood tests of the entire test-eligible herd should be completed within 30 days of the laboratory test date.

Loss of Class A status to Class B status may not occur if legal action has been taken by the State to obtain a test and active legal proceedings are in progress.

Patron lists shall be reviewed to ensure that all dairy herds producing commercial milk have been included in at least three of the four BRT rounds per year. The quality of the samples used for the milk ring test will be monitored at the time of collection. The milk ring test procedure will be adjusted in accordance with herd size. (See Part II, X.)

b. Market Cattle Identification Program (MCI)

- (1) Coverage--All State or federally inspected slaughtering establishments must participate in the Market Cattle Identification program. The rate of sampling of test-eligible market cattle shall be at least 95 percent at each State or federally inspected slaughtering establishment. In cases where the 12-month collection rate is below 95 percent for specific plants, the actions taken to correct the existing situation will be evaluated in determining status. Manmade identification (except brands and tattoos) on test-eligible cattle at time of slaughter are to be collected wherever possible and shall accompany the blood sample to the laboratory. Failure to collect such identification hampers the positive identification of many market cattle reactors. If the failure to trace reactors to the herd of origin is related to the lack of collection of various manmade identification, the MCI program will be considered deficient in the State where the blood is collected.
- (2) Reactors - A minimum of 90 percent of the market cattle reactors during each 12-month period must be traced to the herd of origin and an investigation conducted as outlined in Part I, S, 2, b, within 15 days of official notification. In States with 20 or fewer MCI reactors, a special review may be made of justification for failure to meet tracing of 90 percent of reactors to herd of origin. When a herd blood test is indicated, it should be conducted within 30 days of official notification of market cattle test reactors or the herds are to be confined to the premises under quarantine. (For exceptions see Part II,

W.) All market cattle test reactor herds shall be blood tested within 45 days of the official notification of the reactor unless an approved written individual herd plan is on file which provides for a herd test after a longer interval. Loss of Class A status to Class B status may occur if the herds of origin of rivanol or CF positive market cattle reactors are considered suspicious after a complete epidemiologic investigation and are not tested within 6 months of official notification of the market reactor. Loss of status may not occur if legal action has been taken by the States to obtain a test and active legal proceedings are in progress.

- (3) Reporting results--All MCI reactors originating in the reporting State, including the successful and unsuccessful tracebacks, and blood tests of the herds of origin are to be reported in the data when requesting advancement of status or in the annual report to maintain status. The data summarizing the successful and unsuccessful tracebacks for cattle with backtags and for cattle without backtags should be presented separately.

c. Epidemiologic Surveillance

- (1) Adjacent herds--All adjacent herds or herds having contact of cattle with the infected herd shall have an approved action plan for testing or monitoring the herd in effect within 15 days of disclosure of infection. If a disagreement occurs regarding the necessity for testing a herd, consultation between the herd owner, the chief State animal health official or his representative, the epidemiologist and the herd owner's veterinarian, if requested, will be held to resolve the situation. The initial herd test of those herds requiring a test should be conducted within 30 days of the disclosure of infection in the index herd. (For exceptions see Part II, W.) Loss of status to Class B status may not occur if legal action has been taken by the State to obtain a test and active legal proceedings are in progress.
- (2) Epidemiologically traced herds--All herds found by epidemiological tracing to have sold cattle into an infected herd and all herds found by the

same means to have received cattle from an infected herd shall have an approved action plan for testing or monitoring the herd. Such plans must be in effect within 15 days of locating the source or recipient herd(s). (For exception see Part II, W.) If a disagreement occurs regarding the necessity for testing a herd, consultation between the herd owner, the chief State animal health official or his representative, the epidemiologist and the herd owner's veterinarian if requested, will be held to resolve the situation. The initial herd test of those herds requiring a test should be conducted within 30 days of disclosure of association with the infected herd. (For exceptions see Part II, W.) Loss of status to Class B status may not occur if legal action has been taken by the State to obtain a test and active legal proceedings are in progress.

2. Herd Infection Rate

- a. States must not exceed an accumulated 12-month herd infection rate due to field strain B. abortus of 0.250 percent or 2.5 herds per 1,000 except in States with 10,000 or fewer herds. Infection with field strains must be assumed in each case until veterinary officials in the State show otherwise by culture or by complete epidemiologic investigation. Each infected herd must be enrolled in a program which results in the elimination of brucella infection or depopulation. Herds proven to be infected with Strain 19 are deleted from this calculation but the infected animals are to be sold for immediate slaughter. A special review will be made to determine if a State having a herd infection rate exceeding 0.250 percent but less than 10,000 herds should qualify for Class A status. This evaluation will include but not be limited to consideration of the following factors:

- (1) The number of reactor herds assumed (or proven) to be due to field strain of Brucella sp.;
- (2) The location of the infected herds and the distances between them, i.e., clusters of infected herds or scattered infected herds;

- (3) Whether the herds have a common source(s) or are separate outbreaks and whether secondary spread has occurred;
 - (4) Whether State policies and authorities are adequate and are applied to control and eliminate the outbreak(s);
 - (5) Adequacy of the herd quarantine(s) and its enforcement;
 - (6) Number of additional herds at risk of contracting brucella infection;
 - (7) Whether depopulation has been used to contain the outbreak(s); and
 - (8) The effectiveness of herd management practices in the infected herds to control disease spread within the herd and to other herds at risk.
- b. Herds of origin of MCI reactors in which all test-eligible cattle have been eliminated by slaughter shall be considered infected herds in the determination of the accumulated 12-month herd infection rate. Areas in the qualifying period for Free status shall be handled according to Part V, C, 2, b, under this section.
 - c. An epidemiologic investigation of each herd with reactor cattle shall be conducted within 15 days to identify the potential sources of infection. All such potential sources shall be contacted to determine appropriate action within an additional 15 days. (For exceptions see Part II, W.)

3. MCI Reactor Prevalence Rate

States should maintain a 12-month adjusted MCI reactor prevalence rate not to exceed one reactor per 1,000 cattle tested (0.100 percent). The adjusted MCI prevalence rate is calculated by deleting from the numerator the market cattle reactors originating from known reactor herds, including market cattle reactors from herds in which all test-eligible animals have been eliminated by slaughter, market cattle reactors traced to out-of-State origins, and market cattle reactors originating in herds in which all test-eligible cattle were subsequently tested and found negative for brucellosis. Extenuating circumstances causing the rate to be above the stated

rate must be documented in the annual report. Areas in the qualifying period for Free status shall be handled according to Part V, C, 3, under this section.

4. Uniform Methods and Rules Compliance

- a. States must maintain effective implementation of UM&R requirements as judged by administrative review and epidemiologic evaluation.
- b. Failure to maintain minimum procedural standards as defined in the UM&R may be cause to reclassify the State to Class B status. Prior to removal of status the State may request a peer group review (Part II, V, 5) at their expense. The State and Federal officials in charge of program activities will be notified in writing of any apparent deficiencies that may affect the status of the State classification. The State and Federal officials in charge of the program activities will determine and describe in writing the corrective actions to be taken. The response must include a schedule for making any needed corrective actions. Excessive herd infection rates due to field strains of brucella or excessive adjusted market cattle reactor rates will be cause for immediate loss of status to Class B status. Class A status may be regained by requalifying as for initial Class A Status or, if appropriate, when all deficiencies causing the loss of status have been corrected and a minimum of 6 months have elapsed demonstrating the effectiveness of the corrective action(s).

D. Movement of 1. Feeding

Cattle Within
or from Class
A States or
Areas for the
Following
Purposes

- a. Interstate or intrastate movement into quarantined feedlots or intrastate movement into quarantined pastures. Interstate movement to Class Free States is not permitted for this purpose because quarantined feedlots are not recognized in Class Free States.
 - (1) Exposed cattle from quarantined herds, except steers and spayed heifers, must be "S" hot iron branded before movement and accompanied by an "S" brand permit.
 - (2) Untested test-eligible cattle from other herds (including Certified Brucellosis-Free Herds) may move interstate or intrastate to quarantined feedlots or quarantined pastures without test

restrictions if origin is maintained by means of identification tags, backtags, or brands. A certificate is required for interstate movement. Exceptions to the "S" branding and "S" brand permits are allowed for finished fed heifers moving directly to immediate slaughter at recognized slaughtering establishments and for exposed cattle where movement to slaughter does not require rail or motor carrier transportation.

- b. Movement into other feedlots - Requirements are the same as for breeding cattle.

2. Immediate slaughter

- a. Exposed cattle from quarantined herds shall be "S" hot iron branded and moved with "S" brand permit to recognized slaughtering establishments or to Specifically Approved Stockyards or State approved livestock markets for sale for immediate slaughter. In lieu of "S" branding, cattle may move directly to slaughter from such livestock markets or a farm of origin in sealed vehicles accompanied by an "S" brand permit. Exceptions to the "S" branding and "S" brand permits are allowed for finished fed heifers moving directly to immediate slaughter at recognized slaughtering establishments and for exposed cattle where movement to slaughter does not require rail or motor carrier transportation.
- b. Cattle from nonquarantined herds may move to recognized slaughtering establishments or to Specifically Approved Stockyards or State approved livestock markets for sale for immediate slaughter without test restrictions if identity to source is maintained.

3. Breeding Cattle

- a. Test-eligible cattle from Certified Brucellosis-Free Herds can move without test requirements if identity to source is maintained. A certificate is required for interstate movement.
- b. Test-eligible cattle from nonquarantined herds (excluding Certified Brucellosis-Free Herds) may move intrastate for breeding purposes without test restrictions. A voluntary test in 45-120 days postmovement is recommended.

- c. A negative test within 30 days before movement and a certificate is required for interstate movement from the farm of origin directly to the farm of destination. Cattle may be moved interstate from a farm of origin without a certificate directly to a Specifically Approved Stockyard for the required negative test. A certificate is required for such test negative cattle subsequently moving interstate from a Specifically Approved Stockyard. The 45-120 day postmovement test is strongly recommended.
- d. Steers and spayed heifers from any herd and official calfhood vaccinates of the dairy breeds under 20 months of age, official calfhood vaccinates of the beef breeds under 24 months of age which are not parturient or postparturient, or nonvaccinated cattle less than 18 months of age from nonquarantined herds can move without test or certification restrictions.
- e. Official vaccinates under 12 months of age from quarantined herds with an approved written individual herd plan may move without restriction provided they are further identified with at least a 3/4" diameter hole in the left ear, unless such movement is prohibited by the State Veterinarian of the receiving area.
- f. If cattle are from a herd not known to be affected, and if the cattle being moved have not changed ownership and are not changing ownership, and if the cattle are from herds which have had a complete herd test within 12 months and if any cattle which were added to the herd after the herd test were also tested, and further, if the cattle being moved have not come in contact with cattle not meeting these requirements, then the additional testing requirements of D, 3, for intrastate and interstate movements are not required. The requirement for a complete herd test, including additions, within the previous 12 months may be waived with written concurrence of officials in each State. (The intent of this exception is to allow grazing associations, farmers, and ranchers to follow normal ranching operations although crossing jurisdictional boundaries during such movements without subjecting their cattle to unnecessary handling and testing.)
- g. It is recommended that all female breeding stock moving interstate, especially from higher incidence States, be calfhood vaccinated.

Female dairy cattle which are born after January 1, 1984, and are 4 months of age and over must be official vaccinates if moved into or out of a Class B State or area unless they are moved directly to a recognized slaughtering establishment or to a quarantined feedlot.

All female cattle which are born after January 1, 1984, and are 4 months of age and over must be official vaccinates if moved into or out of a Class C State or area unless they are moved directly to a recognized slaughtering establishment or to a quarantined feedlot.

Female cattle eligible for official calfhood vaccination and required to be officially vaccinated may be moved interstate directly to a specifically approved stockyard and be officially vaccinated upon arrival at the specifically approved stockyard.

PART VII
Class B Status

Introduction: Under movement requirements for cattle from nonquarantined herds in all classes of States, the following cattle are specifically exempt from "testing for movement requirements" by definition in Part I, D, 2, b, and 3, Test-eligible cattle: cattle under 18 months of age (as evidenced by the presence of the first pair of temporary incisor teeth); steers and spayed heifers; official calfhood vaccinates of the dairy breeds under 20 months of age unless they are heavy springers or have calved; official calfhood vaccinates of the beef breeds under 24 months of age (as evidenced by the absence of the first pair of permanent incisor teeth) unless they are heavy springers or have calved; cattle moving directly to slaughter; and cattle moving directly from certified herds. Movement requirements for other cattle under this classification are in this Part under paragraph "D."

A. Size of Area Usually an entire State. A State may request a two-area classification.

The following specific criteria will be met as the conditions of a recommendation for approval of two-area classification within a State:

1. Legislative authority exists for maintaining separate areas within the State.
2. Regulatory authority exists to maintain separate areas within the State.
3. Resources exist and have been committed to maintain separate areas.
4. A creditable method for controlling the movements of animals across the boundary has been demonstrated. Animal and Plant Health Inspection Service will review the procedures with the requesting State.

B. Length of Classification Indefinite. States shall document program status by a 12-month special (annual) report. The special report shall disclose the following information:

1. Herd and cattle population at risk and the source of this information;
2. Dates of period reported;
3. Number of BRT rounds;

4. Number of MCI tests (report slaughter MCI and all other MCI separately);
5. Number of MCI reactors;
6. Number of MCI reactors traced by category such as - to herd of origin and tested with reactors; to herd of origin and tested with negative results; to out-of-State origins; to known infected herds;
7. Number eligible cattle slaughtered and number of testable blood samples collected;
8. Number of herds infected with field strain B. abortus during reporting period;
9. Number and results of blood testing in other species of domestic animals;

(Items 1 through 9 are to be reported on revised VS Form 4-1, application for status. Almost all information is available on VS Form 4-33D, Monthly Report of Brucellosis Eradication Activities, on file in each State.)

10. A narrative description of epidemiologic surveillance investigations and results; MCI investigations and results including number unable to trace due to lack of manmade identification; discussion for each slaughter establishment failing to collect 95 percent blood samples from eligible cattle; specific adherence to other UM&R standards.

Special reports disclosing apparent deficiencies shall be reviewed by VS and State officials to determine the correct status for the State. Special reports may cover any 12 consecutive months; however, no months may be unreported. A State may request advancement at any time the 12-month special report meets the requirements for higher class.

C. Standards
to Attain
and Maintain
Class B
Status

1. Surveillance

- a. Milk Ring Test (BRT) - The milk ring test shall be conducted at least four times per year at approximately equal intervals. An epidemiologic investigation of all herds with suspicious milk ring test results shall be conducted and an approved action plan developed within 30 days of the laboratory test date. When required the

initial herd blood test of the entire test-eligible herd should be completed within 30 days of completion of an approved herd plan. Loss of Class B status to Class C status may not occur if legal action has been taken by the State to obtain a test and if active legal proceedings are in progress.

Patron lists shall be reviewed to ensure that all dairy herds producing commercial milk have been included in at least three of the four BRT rounds per year. The quality of the samples used for the milk ring test will be monitored at the time of collection. The milk ring test procedure will be adjusted in accordance with herd size. (See Part II, X.)

b. Market Cattle Identification Program (MCI)

(1) Coverage - All State or federally inspected slaughtering establishments must participate in the Market Cattle Identification program. The rate of sampling of test-eligible market cattle shall be at least 95 percent at each State or federally inspected slaughtering establishment. In cases where the 12-month collection rate is below 95 percent for specific plants, the actions taken to correct the existing situation will be evaluated in determining status. Manmade identification (except brands and tattoos) on test-eligible cattle at time of slaughter are to be collected wherever possible and shall accompany the blood sample to the laboratory. Failure to collect such identification hampers the positive identification of many market cattle reactors. If the failure to trace reactors to the herd of origin is related to the lack of collection of various manmade identification, the MCI program will be considered deficient in the State where the blood was collected.

(2) Reactors - At least 80 percent of the market cattle reactors during each 12-month period must be traced to the herd of origin and an investigation conducted within 30 days of official notification. In States with 20 or fewer MCI reactors, a special review may be made of justification for failure to meet tracing of 80 percent of reactors to herd of origin. When a herd blood test is indicated,

it should be conducted as outlined in Part I, S, 2, b, within 30 days of official notification of market cattle test reactors or the herds shall be confined to the premises under quarantine. All market cattle test reactor herds shall be blood tested within 45 days of the official notification of the reactor unless an approved written individual herd plan is on file which provides for a herd test after a longer interval. (For exceptions see Part II, W.) Loss of status may occur if the herds of origin of rivanol or CF test positive market cattle reactors are considered suspicious after a complete epidemiologic investigation and are not tested within 6 months of official notification of the market reactor. Loss of Class B status to Class C status may not occur if legal action has been taken by the State to obtain a test and if active legal proceedings are in progress.

- (3) Reporting results--All MCI reactors originating in the reporting State, including the successful and unsuccessful tracebacks, and blood tests of the herds of origin are to be reported in the data when requesting advancement of status or in the annual report to maintain status. The data summarizing the successful and unsuccessful tracebacks for cattle with backtags and for cattle without backtags should be presented separately.

c. Epidemiologic Surveillance

- (1) Adjacent herds--All adjacent herds or other herds having contact of cattle with the infected herd shall have an approved action plan for testing or monitoring the herd in effect within 45 days of disclosure of infection. If a disagreement occurs regarding the necessity for testing a herd, consultation among the herd owner, the chief State animal health official or his representative, the epidemiologist and the owner's veterinarian if requested, will be held to resolve the situation. The initial herd test of those herds requiring a test should be conducted within 45 days of the disclosure of infection in the index herd. (For exceptions see Part II, W.) Loss of Class B status to Class C

status may not occur if legal action has been taken by the State to obtain a test and if active legal proceedings are in progress.

- (2) Epidemiologically traced herds--All herds found by epidemiological tracing to have sold cattle into an infected herd and all herds found by the same means to have received cattle from an infected herd shall have an approved action plan for testing or monitoring the herd. Such plans must be in effect within 45 days of locating the source or recipient herd. (For exceptions see Part II, W.) If a disagreement occurs regarding the necessity for testing a herd, consultation among the herd owner, the chief State animal health official or his representative, the epidemiologist and the owner's veterinarian if requested, will be held to resolve the situation. The initial herd test of those herds requiring a test should be conducted within 60 days of the disclosure of association with the infected herd. (For exceptions see Part II, W.) Loss of Class B status to Class C status may not occur if legal action has been taken by the State to obtain a test and if active legal proceedings are in progress.

2. Herd Infection Rate

- a. States must not exceed an accumulated 12-month herd infection rate due to field strain B. abortus of 1.500 percent or 15 herds per 1,000 except in States with 1,000 or fewer herds. Infection with field strains must be assumed in each case until veterinary officials in the State show otherwise by culture or by a complete epidemiologic investigation. A special review will be made to determine if a State having a herd infection rate exceeding 1.500 percent but less than 1,000 herds should qualify for Class B status. This evaluation will include but is not limited to consideration of the following factors:
 - (1) The number of reactor herds assumed (or proven) to be due to field strain of Brucella sp.;
 - (2) The location of the infected herds and the distances between them, i.e., clusters of infected herds or scattered infected herds;

- (3) Whether the herds have a common source(s) or are separate outbreaks and whether secondary spread has occurred;
 - (4) Whether State policies and authorities are adequate and are applied to control and eliminate the outbreak(s);
 - (5) Adequacy of the herd quarantine(s) and its enforcement;
 - (6) Number of additional herds at risk of contracting brucella infection;
 - (7) Whether depopulation has been used to contain outbreak(s); and
 - (8) The effectiveness of herd management practices in the infected herds to control disease spread within the herd and to other herds at risk.
- b. Herds of origin of MCI reactors in which all test-eligible cattle have been eliminated by slaughter shall be considered infected herds in the determination of the accumulated 12-month herd infection rate.
 - c. An epidemiologic investigation of each herd with reactor cattle shall be conducted within 45 days to identify potential sources of infection. All such potential sources shall be contacted to determine appropriate action within an additional 30 days. (For exceptions see Part II, W.)

3. MCI Reactor Prevalence Rate

States must maintain a 12-month adjusted MCI reactor prevalence rate not to exceed 3 reactors per 1,000 cattle tested (0.300 percent). The adjusted MCI reactor prevalence rate will be reduced from 0.300 percent to 0.200 percent provided the annual review of the Brucellosis Committee of the United States Animal Health Association supports this change. The adjusted MCI reactor prevalence rate is calculated by deleting from the numerator the market cattle reactors originating from known reactor herds, including market cattle reactors from herds in which all test-eligible animals have been eliminated by slaughter, market cattle reactors originating from herds in which all test-eligible cattle

were subsequently tested and found negative for brucellosis, and market cattle reactors traced to out-of-State origins.

4. Uniform Methods and Rules Compliance

- a. A State must maintain effective implementation of UM&R requirements as judged by administrative review and epidemiologic evaluation.
- b. A State must make continued progress as judged over a 2-year period in reducing prevalence of brucellosis as determined by epidemiologic evaluation.
- c. Failure to maintain minimum procedural standards as defined in the UM&R may be cause to reclassify the State to Class C Status. Prior to removal of the status the State may request a peer group review (Part II, V, 5) at their expense. The State and Federal officials in charge of program activities will be notified in writing of any apparent deficiencies that may affect the status of the State classification. The State and Federal officials in charge of the program activities will determine and describe in writing the corrective actions to be taken. The response must include a schedule for making any needed corrective actions. Excessive herd infection rates due to field strains of brucella or excessive adjusted market cattle reactor rates will be cause for immediate loss of status. Class B status may be regained by requalifying as for initial Class B status or, if appropriate, when all deficiencies causing the loss of status have been corrected and a minimum of 6 months have elapsed demonstrating the effectiveness of the corrective action(s).

D. Movement
of Cattle
Within or
From Class
B States or
Areas for
the Following
Purposes

1. Feeding

- a. Interstate or intrastate movement into quarantined feedlots or intrastate movements into quarantined pastures. Interstate movements to Class Free States are not permitted for this purpose because quarantined feedlots are not recognized in Class Free States.
 - (1) Exposed cattle from quarantined herds, except steers and spayed heifers, must be "S" hot iron branded before movement and accompanied by an "S" brand permit.

(2) Test-eligible cattle from nonquarantined herds (excluding Certified Brucellosis-Free Herds) must be tested within 30 days before movement, or be "S" hot iron branded and accompanied by an "S" brand permit, or may be moved to a quarantined feedlot directly from a farm of origin without being "S" branded and without being accompanied by an "S" brand permit if such cattle are "S" branded upon arrival at the quarantined feedlot, or directly from a farm of origin to a specifically approved stockyard for sale to a quarantined feedlot without being "S" branded and without being accompanied by an "S" brand permit. Test-eligible cattle moving interstate on an official negative test must also have a certificate.

b. Interstate or intrastate movement into other feedlots - requirements are the same as for breeding cattle.

2. Immediate slaughter

a. Cattle from Certified Brucellosis-Free Herds may move to recognized slaughtering establishments or to Specifically Approved Stockyards or to State approved livestock markets for sale for immediate slaughter without test restrictions if identity to source is maintained.

b. Exposed cattle from quarantined herds shall be "S" hot iron branded and move with "S" brand permit to recognized slaughtering establishments or to Specifically Approved Stockyards or to State approved livestock markets for sale for immediate slaughter. In lieu of "S" branding, cattle may move directly to slaughter from a Specifically Approved Stockyard or a State approved livestock market or a farm of origin in sealed vehicles accompanied by an "S" brand permit. Exceptions to the "S" branding and "S" brand permits are allowed for finished fed heifers moving directly to immediate slaughter and for exposed cattle where movement to slaughter does not require rail or motor carrier transportation.

c. Test-eligible cattle originating in nonquarantined herds (excluding Certified Brucellosis-Free Herds) may move directly to recognized slaughtering establishments or to Specifically Approved Stockyards or State approved livestock markets for sale for immediate slaughter without "S" hot iron brand or "S" brand

permit. "S" brands and "S" brand permits will be required from such livestock markets to slaughter. In lieu of "S" branding, cattle may move directly to slaughter from such livestock markets in sealed vehicles accompanied by an "S" brand permit or be tested negative within 30 days prior to movement.

- d. Test-eligible cattle originating from dealers' concentration points for slaughter shall be "S" hot iron branded and move with "S" brand permit to a recognized slaughtering establishment or through a Specifically Approved Stockyard or State approved livestock market for sale to slaughter. In lieu of "S" branding, cattle may move directly to slaughter from such livestock markets in sealed vehicles accompanied by an "S" brand permit or be tested negative within 30 days prior to movement.
- e. Steers and spayed heifers from any herd and official calfhood vaccinates of the dairy breeds under 20 months of age, official calfhood vaccinates of the beef breeds under 24 months of age which are not parturient or postparturient, or nonvaccinated cattle less than 18 months of age from nonquarantined herds can move without test or certification restrictions.

3. Breeding cattle

- a. Test-eligible cattle from Certified Brucellosis-Free Herds can move without test restrictions if identity to source is maintained. A certificate is required for interstate movement. It is recommended that the cattle be tested on the premises of destination 45-120 days postmovement.
- b. Test-eligible cattle from other nonquarantined herds may move interstate if they have a negative test within 30 days and a certificate prior to interstate movement. A permit for entry is required from the receiving State prior to movement if moved from a farm of origin directly to the farm of destination. Cattle may be moved interstate from a farm of origin without a certificate and permit for entry directly to a Specifically Approved Stockyard for the required negative test. A certificate is required for such test negative cattle subsequently moving interstate from a Specifically Approved Stockyard. A permit for entry is required from the receiving State prior to

movement from the stockyard. The cattle must be quarantined at destination with a retest 45-120 days postmovement.

- c. Test-eligible cattle from other nonquarantined herds may move intrastate if they have a negative test within 30 days prior to movement. The negative test may be performed at Specifically Approved Stockyards or State approved livestock markets which have approved testing laboratory facilities. A retest on the premises of destination 45-120 days after movement is strongly recommended. No certificate is required.
- d. Steers and spayed heifers from any herd and official calfhood vaccinates of the dairy breeds under 20 months of age, official calfhood vaccinates of the beef breeds under 24 months of age which are not parturient or postparturient, or nonvaccinated cattle less than 18 months of age from nonquarantined herds can move without test or certification restrictions.
- e. Official vaccinates under 12 months of age from quarantined herds with an approved written individual herd plan may move without restriction provided they are further identified with at least a 3/4" diameter hole in the left ear, unless such movement is prohibited by the State Veterinarian of the receiving area.
- f. If cattle are from a herd not known to be affected, and if the cattle being moved have not changed ownership and are not changing ownership, and if the cattle are from herds which have had a complete herd test within 12 months and if any cattle which were added to the herd after the herd test were also tested, and further, if the cattle being moved have not come in contact with cattle not meeting these requirements, then the additional testing requirements of D, 3, for intrastate and interstate movements are not required. The requirement for a complete herd test, including additions, within the previous 12 months may be waived with written concurrence of officials in each State. (The intent of this exception is to allow grazing associations, farmers, and ranchers to follow normal ranching operations although crossing jurisdictional boundaries during such movements without subjecting their cattle to unnecessary handling and testing.)

- g. It is recommended that all female breeding stock moving interstate, especially from higher incidence States, be calfhood vaccinated.

Female dairy cattle which are born after January 1, 1984, and are 4 months of age and over must be official vaccinates if moved into or out of a Class B State or area unless they are moved directly to a recognized slaughtering establishment or to a quarantined feedlot.

All female cattle which are born after January 1, 1984, and are 4 months of age and over must be official vaccinates if moved into or out of a Class C State or area unless they are moved directly to a recognized slaughtering establishment or to a quarantined feedlot.

Female cattle eligible for official calfhood vaccination and required to be officially vaccinated may be moved interstate directly to a specifically approved stockyard and be officially vaccinated upon arrival at the specifically approved stockyard.

PART VIII
Class C Status

Introduction: Under movement requirements for cattle from nonquarantined herds in all classes of States, the following cattle are specifically exempt from "testing for movement requirements" by definition in Part I, D, 2, b, and 3, Test-eligible cattle: cattle under 18 months of age (as evidenced by the presence of the first pair of temporary incisor teeth); steers and spayed heifers; official calfhood vaccinates of the dairy breeds under 20 months of age unless they are heavy springers or have calved, official calfhood vaccinates of the beef breeds under 24 months of age (as evidenced by the absence of the first pair of permanent incisor teeth) unless they are heavy springers or have calved; cattle moving directly to slaughter; and cattle moving directly from certified herds. Movement requirements for other cattle under this classification are in this Part under paragraph "D."

A. Size of Area Usually an entire State. A State may request a two-area classification.

The following specific criteria will be met as the conditions of a recommendation for approval of two-area classification within a State:

1. Legislative authority exists for maintaining separate areas within the State.
2. Regulatory authority exists to maintain separate areas within the State.
3. Resources exist and have been committed to maintain separate areas.
4. A creditable method for controlling the movements of animals across the boundary has been demonstrated. Animal and Plant Health Inspection Service will review the procedures with the requesting State.

B. Length of Classification Indefinite. States shall document program status by a 12-month special (annual) report. The special report shall disclose the following information:

1. Herd and cattle population at risk and the source of this information;
2. Dates of period reported;
3. Number of BRT rounds;

4. Number of MCI tests; (report slaughter MCI and all other MCI separately)
5. Number of MCI reactors;
6. Number of MCI reactors traced by category such as - to herd of origin and tested with reactors; to herd of origin and test with negative results; to out-of-State origins; to known infected herds;
7. Number of eligible cattle slaughtered and number of testable blood samples collected;
8. Number of herds infected with field strain B. abortus during reporting period;
9. Number and results of blood testing in other species of domestic animals.

(Items 1 through 9 are to be reported on revised VS Form 4-1, application for status. Almost all information is available on VS Form 4-33D, Monthly Report of Brucellosis Eradication Activities, on file in each State.)

10. A narrative description of epidemiologic surveillance investigations and results; MCI investigations and results including number unable to trace due to lack of manmade identification; discussion for each slaughter establishment failing to collect 95 percent blood samples from eligible cattle; specific adherence to other UM&R standards.

Special reports disclosing apparent deficiencies shall be reviewed by VS and State officials to determine the correct status for the State. Special reports may cover any 12 consecutive months; however, no months may be unreported. A State may request advancement at any time the 12-month special report meets the requirements for the higher class.

C. Standards
to Maintain
Class C
Status

1. Surveillance

- a. Milk Ring Test (BRT) - The milk ring test shall be conducted at least four times per year at approximately equal intervals. An epidemiologic investigation of all herds with suspicious milk ring test results shall be conducted and an approved action plan developed within 30 days of the laboratory test date. When required the

initial herd blood test of all test-eligible cattle should be conducted within 30 days of the completion of an approved herd plan.

Patron lists shall be reviewed to ensure that all dairy herds producing commercial milk have been included in at least three of the four BRT rounds per year. The quality of the samples used for the milk ring test will be monitored at the time of collection. The milk ring test procedure will be adjusted in accordance with the herd size. (See Part II, X.)

b. Market Cattle Identification Program (MCI)

(1) Coverage - All State or federally inspected slaughtering establishments must participate in the Market Cattle Identification program. The rate of sampling of test-eligible market cattle shall be at least 95 percent at each State or federally inspected slaughtering establishment. In cases where the 12-month collection rate is below 95 percent for specific plants, the actions taken to correct the existing situation will be evaluated in determining status. Manmade identification (except brands and tattoos) on test-eligible cattle at time of slaughter are to be collected whenever possible and shall accompany the blood sample to the laboratory. Failure to collect such identification hampers the positive identification of many market cattle reactors. If the failure to trace reactors to the herd of origin is related to the lack of collection of manmade identification, the MCI program will be considered deficient in the State where the blood was collected.

(2) Reactors - At least 80 percent of the market cattle reactors during each 12-month period must be traced to the herd of origin and an investigation conducted as outlined in Part I, S, 2, b, within 30 days of official notification. When a herd blood test is indicated, it should be conducted within 30 days of official notification of market cattle test reactors or the herds shall be confined to the premises under quarantine. All market cattle test reactor herds shall be blood tested within 45 days of the official notification of the reactor unless an approved written individual herd plan is on file which provides

for a herd test after a longer interval. (For exceptions see Part II, W.) Loss of status may occur if the herds of origin of rivanol or CF test positive market cattle reactors are considered suspicious after a complete epidemiologic investigation and are not tested within 6 months of official notification of the market reactor. Loss of status may not occur if legal action has been taken by the State to obtain a test and if active legal proceedings are in progress.

- (3) Reporting Results - All MCI reactors originating in the reporting State, including the successful and unsuccessful tracebacks, and blood tests of the herds of origin are to be reported in the data with the annual report. The data summarizing the successful and unsuccessful tracebacks for cattle with backtags and for cattle without backtags should be presented separately.

c. Epidemiologic surveillance

- (1) Adjacent herds - All adjacent herds or other herds having contact of cattle with the infected herd shall have an approved action plan for testing or monitoring the herd in effect within 45 days of disclosure of infection. If a disagreement occurs regarding the necessity for testing the herd, consultation among the herd owner, the chief State animal health official, or his representative, the epidemiologist and the herd owner's veterinarian if requested, will be held to resolve the situation. The initial herd test of those herds requiring a test should be conducted within 60 days of the disclosure of infection in the index herd. (For exceptions see Part II, W.)
- (2) Epidemiologically traced herds - All herds found by epidemiologic tracing to have sold cattle into an infected herd and all herds found by the same means to have received cattle from an infected herd shall have an approved action plan for testing or monitoring the herd. Such plans must be in effect within 45 days of locating the source or recipient herd. (For exceptions see Part II, W.) If a disagreement occurs regarding the necessity for testing the herd, consultation among the herd owner, the chief State animal

health official or his representative, the epidemiologist, and the herd owner's veterinarian, if requested, will be held to resolve the situation. The initial herd test of those herds requiring a test should be conducted within 60 days of disclosure of association with the infected herd. (For exceptions see Part II, W.)

2. Herd Infection Rate

- a. In States with 1,000 or more herds the accumulated 12-month herd infection rate due to field strain B. abortus exceeds 1.500 percent or 15 herds per 1,000. A special review will be conducted in States with smaller herd populations but with herd infection rates exceeding 1.500 percent to determine if they should be included as a Class C State. Infection with field strain must be assumed in each case until veterinary officials in the State show otherwise by culture or by a complete epidemiologic investigation.
- b. Herds of origin of MCI reactors in which all test-eligible cattle have been eliminated by slaughter shall be considered infected herds in the determination of the accumulated 12-month herd infection rate.
- c. An epidemiologic investigation of each herd with reactor cattle shall be conducted within 45 days to identify potential sources of infection. All such potential sources shall be contacted to determine appropriate action within an additional 30 days. (For exceptions see Part II, W.)

3. MCI Reactor Prevalence Rate

The 12-month adjusted MCI reactor prevalence rate exceeds three reactors per 1,000 cattle tested (0.300 percent). The adjusted MCI reactor prevalence rate will be reduced from 0.300 percent to 0.200 percent provided the annual review by the Brucellosis Committee of the United States Animal Health Association supports this change. The adjusted MCI reactor prevalence rate is calculated by deleting from the numerator the market cattle reactors originating from known reactor herds, including market cattle reactors from herds in which all test-eligible animals have been eliminated by slaughter, market cattle reactors originating in herds in which all test-eligible cattle were subsequently tested and found negative for brucellosis, and market cattle reactors traced to out-of-State origins.

4. Uniform Methods and Rules Compliance

- a. A State must maintain effective implementation of the UM&R requirements as judged by administrative review and epidemiologic evaluation.
- b. A State must make continued progress as judged over a 2-year period in reducing prevalence of brucellosis as determined by epidemiologic evaluation.
- c. Failure to maintain minimum procedural standards as defined in the UM&R may be cause to reclassify the State as a Federal quarantined area. Prior to removal of status the State may request a peer group review (Part II, V, 5) at their expense. The State and Federal officials in charge of program activities will be notified in writing of any apparent deficiencies that may affect the status of the State classification. The State and Federal officials in charge of the program activities will determine and describe in writing the corrective actions to be taken. The response must include a schedule for making any needed corrective actions. Class C status may be regained when all of the deficiencies causing the loss of status have been corrected and a minimum of 6 months have elapsed demonstrating the effectiveness of the corrective action(s).

D. Movement of Cattle Within or from Class C States or Areas for the Follow- ing Purposes

1. Feeding

- a. Interstate or intrastate movement into quarantined feedlots or intrastate movement into quarantined pastures. Interstate movement to Class Free States is not permitted for this purpose because quarantined feedlots are not recognized in Class Free States.
 - (1) Exposed cattle from quarantined herds, except steers and spayed heifers, must be "S" hot iron branded before movement and accompanied by an "S" brand permit.
 - (2) Test-eligible cattle from nonquarantined herds (excluding Certified Brucellosis-Free Herds) must be tested within 30 days before movement, or be "S" hot iron branded and accompanied by an "S" brand permit, or may be moved to a quarantined feedlot directly from a farm of origin without being accompanied by an "S"

brand permit if such cattle are "S" branded upon arrival at the quarantined feedlot, and such cattle may be moved directly from a farm of origin to a specifically approved stockyard for sale to a quarantined feedlot without being "S" branded and without being accompanied by an "S" brand permit. Test-eligible cattle moving interstate on an official negative test must also have a certificate.

- b. Interstate or intrastate movement into other feedlots - requirements are the same as for breeding cattle.

2. Immediate slaughter

- a. Cattle from Certified Brucellosis-Free Herds may move to recognized slaughtering establishments or to Specifically Approved Stockyards or State approved livestock markets for sale for immediate slaughter without test restrictions if identity to source is maintained.
- b. Exposed cattle from quarantined herds shall be "S" hot iron branded and move with "S" brand permit to recognized slaughtering establishments or to Specifically Approved Stockyards or to State approved livestock markets for sale for immediate slaughter. In lieu of "S" branding, cattle may move directly to slaughter from such livestock markets or a farm of origin in sealed vehicles accompanied by an "S" brand permit. Exceptions to the "S" branding and the "S" brand permits are allowed for finished fed heifers moving directly to immediate slaughter and for exposed cattle where movement to slaughter does not require rail or motor carrier transportation.
- c. Test-eligible cattle originating in nonquarantined herds (excluding Certified Brucellosis-Free Herds) may move directly to recognized slaughtering establishments or to Specifically Approved Stockyards or State approved livestock markets for sale for immediate slaughter without "S" hot iron brand or "S" brand permit. "S" brands and "S" brand permits will be required from such livestock markets to slaughter. In lieu of "S" branding, cattle may move directly to slaughter from such livestock markets in sealed vehicles accompanied by an "S" brand permit or be tested negative within 30 days prior to movement.

- d. Test-eligible cattle originating from dealers concentration points for slaughter shall be "S" hot iron branded and move with "S" brand permit to a recognized slaughtering establishment or through a Specifically Approved Stockyard or State approved livestock market for sale to slaughter. In lieu of "S" branding, cattle may move directly to slaughter from such livestock markets in sealed vehicles accompanied by an "S" brand permit or be tested negative within 30 days prior to movement. An exception to the "S" branding and "S" brand permit is allowed where movement to slaughter does not require rail or motor carrier transportation.
- e. Steers and spayed heifers from any herd and official calfhood vaccinates of the dairy breeds under 20 months of age, official calfhood vaccinates of the beef breeds under 24 months of age which are not parturient or postparturient, or nonvaccinated cattle less than 18 months of age from nonquarantined herds can move without test or certification restrictions.

3. Breeding Cattle

- a. Test-eligible cattle from Certified Brucellosis-Free Herds can move without test restrictions if identity to source is maintained. A certificate is required for interstate movement. It is recommended that the cattle be tested on the premises of destination 45-120 days postmovement.
- b. Test-eligible nonvaccinated cattle from other nonquarantined herds may move interstate if they have two consecutive negative tests at least 60 days apart. The second negative test must be within 30 days prior to movement. The first test is valid for 12 months. If the first test includes all the test-eligible animals in herds that have been intact 120 days or more such animals may move immediately following the negative herd test. The negative herd test is valid for 12 months. Animals moving from such negative herds must be tested negative within 30 days of movement. Animals moving under this provision must be accompanied by a written statement signed by the owner and accredited veterinarian or by other documentation which will establish that such animals originated from a herd which has been intact for at least 120 days prior to movement. A certificate is required

from the State of origin and a permit for entry is required from the receiving State prior to interstate movement from a farm of origin directly to a farm of destination. Cattle may be moved interstate from a farm of origin without a certificate and prior permit for entry directly to a Specifically Approved Stockyard for the second negative test. A certificate is required for such test negative cattle subsequently moving interstate from a Specifically Approved Stockyard. A permit for entry is required from the receiving State prior to movement from the stockyards. The cattle must be quarantined at destination with a retest 45 to 120 days postmovement.

- c. Test-eligible vaccinated cattle from other nonquarantined herds may move interstate with only one negative test within the preceding 30 days followed by quarantine at destination and retest within 45 to 120 days. A certificate from the State of origin and a permit for entry from the receiving State are required prior to interstate movement if the cattle move from a farm of origin directly to the farm of destination. Cattle may be moved interstate from a farm of origin without a certificate and permit for entry directly to a Specifically Approved Stockyard for the required negative test. A certificate is required for such test negative cattle moving interstate from a Specifically Approved Stockyard. A permit for entry is required from the receiving State prior to movement from the stockyards.
- d. Test-eligible cattle from other nonquarantined herds may move intrastate if they have a negative test within 30 days prior to movement. The negative test may be performed at Specifically Approved Stockyards or State approved livestock markets with approved testing laboratory facilities. A retest on the premises of destination 45 to 120 days after movement is strongly recommended. No certificate is required.
- e. Steers and spayed heifers from any herd and official calfhooed vaccinates of the dairy breeds under 20 months of age, official calfhooed vaccinates of the beef breeds under 24 months of age which are not parturient or postparturient, or nonvaccinated cattle less than 18 months of age from nonquarantined herds can move without test or certification restrictions.

- f. Official vaccinates under 12 months of age from quarantined herds with an approved written individual herd plan may move without restriction provided they are further identified with at least a 3/4" diameter hole in the left ear, unless such movement is prohibited by the State Veterinarian of the receiving area.
- g. If the cattle are from herds not known to be affected, and if the cattle being moved have not changed ownership and are not changing ownership, and if the cattle are from herds which have had a complete negative herd test within 12 months and if any cattle which were added to the herd after the herd test were also tested, and further, if the cattle being moved have not come in contact with cattle not meeting these requirements, then the additional testing requirements of D, 3, for intrastate and interstate movements are not required. (The intent of this exception is to allow grazing associations, farmers, and ranchers to follow normal ranching operations although crossing jurisdictional boundaries during such movements without subjecting their cattle to unnecessary handling and testing.)
- h. It is recommended that all female breeding stock moving interstate, especially from higher incidence States, be calfhood vaccinated.

Female dairy cattle which are born after January 1, 1984, and are 4 months of age and over must be official vaccinates if moved into or out of a Class B State or area unless they are moved directly to a recognized slaughtering establishment or to a quarantined feedlot.

All female cattle which are born after January 1, 1984, and are 4 months of age and over must be official vaccinates if moved into or out of a Class C State or area unless they are moved directly to a recognized slaughtering establishment or to a quarantined feedlot.

Female cattle eligible for official calfhood vaccination and required to be officially vaccinated may be moved interstate directly to a specifically approved stockyard and be officially vaccinated upon arrival at the specifically approved stockyard.

PART I

Definitions (not alphabetized: see contents for alphabetized listing)

- A. Reactor Any swine that disclose complete STT agglutination reactions to the blood titer dilution of 1:100 or higher. Any swine in an infected herd or on an incomplete test of a herd of unknown status having a complete reaction in the 1:25 dilution or higher. Any swine disclosing a positive card test reaction or are found infected by other diagnostic procedures.
- B. Suspect Card test positive swine disclosed in a herd which is otherwise serologically, bacteriologically, and epidemiologically negative may be held under herd quarantine until subjected to subsequent tests to determine the status of the animals.
- C. Negative Any swine from an infected herd or herd of unknown status that discloses an STT agglutination reaction of less than complete agglutination in the blood titer dilution of 1:25 or that has no reaction to the card test.
- Any swine from a validated herd not known to be infected in a validated area, or on a complete herd test that discloses an STT agglutination reactor of less than complete agglutination in the blood titer dilution of 1:100 or that has no reaction to the card test.
- D. Herd Test The herd test shall include all breeding swine 6 months of age and older. All swine being held for feeding purposes, separate and apart from breeding swine, are exempted from herd test requirements. All swine tested shall be identified with an eartag, tattoo, or other permanent identification.
- E. Feedlot A confined drylot area for finishing feeding swine on concentrated feed with no facilities for pasturing or grazing. All swine in feedlots shall be held separate and apart from all breeding swine.
- F. Market Test Swine Sows, boars, and stags moving in trade through auction markets, stockyards, buying stations, or to slaughter establishments; also those sows, boars, and stags assembled at farms or ranches that are being readied for immediate movement to markets, stockyards, or slaughtering establishments or other sales.
- G. Traceback of Reactors
1. Successful Traceback of Reactors
- A successful traceback occurs when the premises or herd of origin of a market test reactor is located and the herd is tested. If the herd has been dispersed or a significant proportion of the herd has been dispersed, the herds of destination of these dispersed animals must

be located and the brucellosis status of these dispersed animals established by blood test to claim a successful traceback. Further testing in the herd of destination should be conducted as is deemed necessary. If all animals at the premises of origin were sold for slaughter, a successful traceback can also be claimed. However, if some animals were not sold for slaughter, then the animals sold for return to farms must be traced and tested at destination to claim successful traceback. Tracing to dealers, feedlots, commission firms, and such are not considered successful tracebacks of reactors.

2. Epidemiologic Investigation of Reactors

Every market swine test reactor will be handled as outlined in (a) or (b) below:

- (a) Reactors in marketing channels with positive rivanol or CF titers and those on which rivanol or CF tests were not conducted:
 - 1. Every effort will be made to trace reacting animals to their herd of origin. This will include tracing all swine in lots with unidentified reactors and conducting an epidemiological examination of their herd of origin.
 - 2. Blood test the herd of origin. Multiple herds of origin of swine in lots with unidentified reactors will be tested in descending order of their probability of being infected as determined by an epidemiological examination of the source herds.
 - 3. A report outlining the conduct of the traceback investigation will be prepared and submitted on all reactors investigated under this section. All steps taken in unsuccessful traceback investigations must be documented and reviewed by the station epidemiologist for adequacy.
- (b) Reactors in marketing channels which were negative to the rivanol or CF test.

A written record must be maintained for all such reactors. This record will include as a minimum the date and place the animal was bled, test results, identification data, number in the consignment, and the consignor's name and address. (The ANH Form 4-100

is recommended for maintaining this information.)
Traceback investigations and herd of origin testing
are recommended but not required.

- H. Exposed Swine Swine that are part of a known infected herd or have been in contact with brucellosis reactors in marketing channels for periods of 24 hours or periods of less than 24 hours if the reactor has recently aborted, farrowed, or has a vaginal or uterine discharge are considered exposed regardless of the blood test results and must be placed under quarantine and restricted pending slaughter or testing after return to herd of origin.
- I. Infected Herd A herd in which any of the swine discloses a standard tube test agglutination reaction of complete 1:100 or higher and/or is positive on the card test. The herd may be reclassified by a qualified epidemiologist on the results of additional diagnostic procedures if the percentage of reactor animals is less than 5 percent.

PART II
Procedures--Minimum Program Standards

- A. Laboratories Blood samples are to be tested only by cooperating State-Federal laboratories using appropriate procedures or by such persons as may be authorized to conduct Buffered Acidified Plate Antigen (BAPA) Test and the card test. All card positive and BAPA positive samples tested at other than cooperating State-Federal laboratories shall be promptly submitted and confirmed at the cooperating State-Federal laboratory. Each State or region shall have the laboratory capability of conducting the complement-fixation and rivanol tests, and of bacteriological culturing of B. suis from tissues and blood. A cooperative system shall exist with State, universities, and industry for regular review of the training and the performance of laboratory personnel and for assisting laboratories in the development of systems of continuing quality control for all laboratory tests and culturing procedures. State and regional laboratories shall be evaluated by a review committee, which includes qualified epidemiologists, at least once in each 3-year period. Individuals conducting on-site testing under the MST Program will be monitored on a continuing basis and formally evaluated on accepted testing procedures annually.
- B. Reporting Brucellosis testing and other activities conducted privately or as part of the official Brucellosis Eradication Program, must be reported immediately to State-Federal cooperating agencies.
- C. Supervision The official Brucellosis Eradication Program shall be supervised by full-time State or Federal veterinarians.
- D. Quarantine All swine in infected herds must be confined to the premises until freed of brucellosis or sold for slaughter under permit. Two consecutive negative herd tests are required for release of quarantine with the first test occurring not less than 30 days after the removal and slaughter of all reactors and the second test to occur not less than 90 days following the first negative test. Herds of origin of MST reactors which fail to reveal additional reactors on a test of the entire herd would not be required to be held under quarantine for additional testing unless evidence suggestive of brucellosis infection or exposure thereto is present.
- E. Retest of Infected Herds Variable according to herd plan selected (see Part VI).
- F. Cleaning and Disinfection Premises shall be cleaned and disinfected under regulatory supervision within 15 days following the removal of reactors or the entire herd for slaughter. An extension of time may be considered under extenuating circumstances. Exemptions

from cleaning and disinfection requirements, when indicated, can be authorized by the Cooperating State-Federal officials directing the brucellosis program activities within the State.

- G. Classification of Swine
1. Card test--Card test results are classified as either negative or positive.
 2. Standard tube test--The blood titers of swine tested by the STT method are classified by use of the following:

If all of the following apply:
 - a. No animals on test with titers greater than I 1:100,
 - b. Not a retest of an infected herd, and
 - c. Complete herd test or incomplete test of a validated herd.

Then use the following:

1:25	1:50	1:100	
I	--	--	NEGATIVE
+	--	--	NEGATIVE
+	I	--	NEGATIVE
+	+	--	NEGATIVE
+	+	I	NEGATIVE

If one or more of the following apply:

- a. One or more animals on test with titer greater than I 1:100.
- b. Retest of an infected herd, or
- c. Incomplete test of a herd of unknown status.

Then use the following:

1:25	1:50	1:100	
I	--	--	NEGATIVE
+	--	--	REACTOR
+	I	--	REACTOR
+	+	--	REACTOR
+	+	I	REACTOR
+	+	+	REACTOR

3. Semen plasma test--The semen plasma test is approved as an official test in boars used for artificial insemination when used in conjunction with the card test and/or the standard tube test. The classification of such animals shall be based on the maximum agglutination titer of either test.

- H. Identification of Reactor Swine
Reactor swine are to be permanently identified by placing an approved reactor eartag in the left ear.
- I. Immediate Slaughter of Reactors
Reactor swine must be sold for slaughter and removed from the premises under State or Federal permit within 15 days of the date of identification (reactor herds under Plan 2, Part VI, may handle reactors according to recommended procedures of the plan). Reactors shall remain on the premises where discovered until a State or Federal permit for movement to slaughter has been obtained. Movement for immediate slaughter must be to a slaughtering establishment where Federal or State inspection is maintained or to a State or Federal approved market for sale to such slaughtering establishment. Reactor swine upon delivery to the slaughtering establishment shall be slaughtered as soon as practical. The time may be extended for reasons mutually acceptable to the cooperating State and Federal officials in charge.
- J. Movement of Quarantined and Exposed Swine
Quarantined and exposed swine must be moved under permit and can be moved for immediate slaughter or returned to the herd of origin. When moved, the swine must be maintained separate and apart from all other classes of livestock. When moved to other than the herd of origin, exposed animals will be individually identified by eartag and the number recorded on the permit.

- K. Entering Premises Persons engaged in the Brucellosis Eradication Program shall be authorized to enter premises to carry out eradication procedures.
- L. Services to Owner Services should be rendered without expense to livestock owners as long as funds for such purposes are available and such services are not required to be performed at owner's expense by State regulations.
- Contracts with accredited veterinarians, nonprofessionals, other State and Federal agencies, or with management of privately owned firms are to be used as needed to assist State and Federal animal health personnel accomplish necessary sample collections, animal identification, and other activities.
- M. Infected Herd Plan Advantages and disadvantages of the three herd plans in Part VI should be discussed with the owner. Plan 1 should be the plan of choice whenever the owner finds it an acceptable alternative. The herd owner is to sign an agreement to follow one of the three herd plans.
- N. Human Infection All human cases of B. suis should be reported to appropriate public health officials. An extensive epidemiological investigation should be conducted in cooperation with the public health officials.

PART III

Participation in Herd or Area Validation Plans

- A. Obtaining Initial Validation Status To obtain initial validation status, the herd or area must carry out the accepted procedures in Part IV or V for qualifying a herd or area and must meet all of the qualifying standards given under Part IV or V.
- B. Maintaining Validation Status State and Federal officials in charge of the program activities in each State are responsible for a continuous evaluation on the efficiency of local procedures for locating and eliminating infected swine. The minimum standards as described for each plan in Parts IV and V, Brucellosis Eradication Uniform Methods and Rules, must be met or exceeded throughout the validation period to maintain continuous status.
- C. Terminating Validation Status Herd or area validation status may be terminated at any time during the period if a herd or area does not maintain adequate surveillance measures or fails to comply with quarantine, testing schedules, initial testing schedules for suspicious herds detected by the surveillance measures, or proper disposal of reactors unless legal action against the livestock owner has been initiated by State's attorney and is in progress.
- D. Reinstatement of Validation Status When herds or areas lose validation status because of deficiencies in levels of surveillance or in procedures necessary for locating infected herds, controlling infected and exposed swine, and eliminating infected swine as prescribed under the various plans and procedures, the validation status may be reinstated upon presentation of sufficient evidence showing that the deficiencies have been corrected. Areas in which the deficiencies have not been corrected within 6 months of the termination of the status must qualify for initial validation.

PART IV

Validated Brucellosis-Free Herds of Swine

A. Qualifying Methods

A herd may qualify by one or more of the following methods:

1. Complete herd test--Swine herds may be initially validated or revalidated on a negative herd test of all breeding swine 6 months of age and over in the herd.
2. Market swine testing (MST)
 - a. Initial validation--MST not used.
 - b. Revalidation--A minimum of 20 percent of the adult breeding swine (6 months of age and over) in the herd must be tested during the validation period with at least one-half of the MST coverage obtained during the last 6 months of the period. This requires credit back to farm of origin to maintain individual validated herd status. The herd of origin of market swine reactors will be quarantined and the validated herd status suspended until a herd test is conducted. The herd test should be conducted within 30 days of disclosure of the market reactor. Individual herd records for the market swine test results to support this method of validation must be maintained by the State cooperator.
3. Increment testing
 - a. Initial validation--Increment testing not used.
 - b. Revalidation--Adult breeding swine (6 months of age or over) are tested in increments as specified in an approved herd testing plan with each breeding animal in the herd tested at least once during the 1-year validation period.

B. Qualifying Standards

1. Size of unit--herd basis--Applies to all offspring including specific pathogen-free pigs from such herds.
2. Length of status--12 months.
3. Testing period
 - a. Initial validation: A herd can be validated on the results of the one negative herd test.
 - b. Revalidation--A negative test of all breeding swine (6 months of age or over) conducted within 10 to 14 months of the last validation date or establish that at least 20 percent of the adult breeding swine were tested under a market swine testing program during

the year and that at least one-half of sampling occurred during the last 6 months of the validation period, or that all breeding swine (6 months of age or over) in the herd are tested in increments according to a specified herd testing plan with each breeding animal tested at least once during the 1-year validation period.

4. Herd infection rate--The individual herd must disclose no evidence of infection at time of validation or revalidation.
5. Animal infection rate--The individual animals must disclose no evidence of infection at the time of herd validation or revalidation.
6. Suspects--Card test positive swine disclosed in a herd which is otherwise serologically, bacteriologically, and epidemiologically negative may be held under herd quarantine until subjected to subsequent tests to determine the status of the animals.
7. Herd status, if infection occurs--When one or more reactors are disclosed in a validated herd or in a herd under test for initial validation, it shall be considered infected and the quarantine and retest provisions in Part II, D and E, shall apply.
 - a. Initial validation--A herd qualifies for initial Validated Brucellosis-Free status when free of infection, all provisions for release of quarantine have been met, and when the additional provisions required under Part IV, A, 1, have been met.
 - b. Revalidation--If on a complete or partial test of a validated herd, reactors are disclosed, then herd validation status is terminated until all provisions for release of quarantine have been met, and until the additional provisions for initial Validated Brucellosis-Free herd status required under Part IV, A, 1, have been met.

Herd retests for quarantine release and to fulfill the provisions required under Part IV, A, 1, may be conducted concurrently.
8. Movement of swine into validated herds from:
 - a. Validated Brucellosis-Free herds--No test requirement.

- b. Nonvalidated herds in any area and not under quarantine and added for breeding purposes-- Individual animals must have two consecutive tests at least 60 days apart with the second test within 30 days of movement. With bred sows and gilts the second test should be at least 30 days after farrowing.
 - c. Feedlots--Swine from feedlots may not be added to Validated Brucellosis-Free herds. However, swine may be consigned to feedlots on validated herd premises without test provided such swine are held in isolation separate and apart from all breeding stock.
 - d. Slaughter channels--Slaughter swine may not be added to Validated Brucellosis-Free Herds.
9. Movement of swine semen for artificial insemination into validated herds from:
- a. Purebred herds--Purebred herds from which semen is collected must be validated on the basis of herd blood tests.
 - b. Commercial boar studs--Commercial boar studs from which semen is collected must be validated on the basis of herd blood tests and herd semen agglutination tests.

PART V
Validated Brucellosis-Free Areas

- A. Qualifying Methods An area may attain Validated Free status by successfully carrying out the requirements of the three qualifying stages.

1. Stage I

- a. States can enter Stage I by submitting a joint statement by the Area Veterinarian in Charge and responsible State official to the appropriate Veterinary Services Regional Director, stating:

(1) That all State authorities listed below exist and are in effect; or if any of the listed authorities do not exist the statement should explain steps that are expected to be taken to gain authority or why they are not felt to be necessary for the program in that State.

(a) Authority to place and maintain quarantine on any premises on which swine are infected with or exposed to brucellosis or suspected of being infected.

(b) Authority to regulate intrastate movement of swine infected with or exposed to brucellosis.

(c) Authority to perform necessary tests and epidemiological investigations to determine the presence or absence of brucellosis in swine.

(d) Authority to require proper identification and disposal of brucellosis infected and exposed swine.

(e) Authority to require cleaning and disinfection of premises, vehicles, and equipment which may have been contaminated by swine infected with brucellosis.

(f) Authority to conduct and control the procedures for testing and reporting all tests.

(g) Authority to require tattoo or other approved individual identification for intrastate movement of slaughter swine (sows and boars) which is compatible with approved identification methods for interstate movement.

- (h) Authority to maintain farm of origin identification records in a manner that makes traceback of swine possible, and said records be made available to regulatory personnel for program purposes.
- (i) Authority to require change of ownership testing on breeding swine from nonvalidated herds.
- (2) That they have established a State swine brucellosis committee composed of producers and representatives of other industry groups.
- (3) That all individuals and firms responsible for identifying swine under 9 CFR Part 78 are in compliance.
- (4) That they participate in a Validated Brucellosis-Free Herd Program.

(b) Stage I--Requirements

- (1) Quarantine and promptly test all suspicious herds to establish status. Depopulate or initiate an active retest program for those determined to be infected.
- (2) Tag and slaughter reactors within established time limits.
- (3) Comply with all provisions of the Uniform Methods and Rules (UM&R), Chapter 2, that are not dependent upon action by, or in, another State.
- (4) Utilize informational material prepared by USDA information staff and other cooperating agencies for distribution through such routes as the Cooperative Extension Service, university swine disease specialists, State veterinary publications and appropriate news agencies.
- (5) Prepare an educational statement intended to accompany all breeding swine on transfer of ownership.

2. Stage II

- a. States can enter Stage II by documenting that they have met all of the requirements of Stage I.

b. Stage II--Requirements

- (1) Compliance with all Stage I requirements.
- (2) An active program to locate and eliminate infection. Any of the following basic surveillance programs can be selected:
 - (a) Complete herd (area) testing--test all breeding swine over 6 months of age in the qualifying area. The complete herd test must be conducted within the 18-month period prior to the date of validation is requested.
 - (b) Slaughter surveillance (alternate method 1) during a 1-year period:
 - (i) Test all herds selling breeding stock.
 - (ii) Test 90 percent of the sows and boars marketed from the area each year at slaughter.
 - (iii) Trace 90 percent of the reactors to their herds of origin and eliminate the disease by testing or depopulation.
 - (c) Slaughter surveillance (alternate method 2) during a 2-year period:
 - (i) Test all herds selling breeding stock on the farm.
 - (ii) Maintain traceback capability from slaughter to origin at 50 percent, or greater (see Traceback Capability Chart) and eliminate the disease by testing or depopulation.

3. Stage III - Validated Brucellosis-Free Status

- a. A State will be initially validated as a brucellosis-free area when it meets the qualifying standards in Part V, Section B of the UM&R, and:
 - (1) It has carried out the requirements of the selected surveillance method shown in Stage II, or

- (2) It has not had a diagnosed case of swine brucellosis in the preceding 12 months and a statistical analysis of combined tests' results (MST, change of ownership, farm, validation, diagnostic test, etc.) conducted during the period shows an effect equivalent to the surveillance attained by an alternate method.

b. Revalidation

- (1) Complete herd testing--Validated States or areas may be revalidated by a negative herd test on all breeding swine 6 months of age or older. The complete herd test to be conducted within the 18-month period prior to the date revalidation is requested.
- (2) Slaughter surveillance (alternate methods)--The entire State may maintain its validation status if the following procedures are carried out:
 - (a) The traceback capability from slaughter is maintained at 50 percent or greater, herds of origin of successfully traced reactors are tested, all MST reactors and tests of herds of origin of reactors must be reported.
 - (b) When infection is found, the herd of origin is freed of infection within 6 months and an epidemiologic investigation is carried out to determine extent of spread.
- (3) Combined surveillance--States that have met all other requirements but are unable to qualify for revalidation due to their inability to completely satisfy the surveillance requirements of complete herd testing or the alternate method may qualify by showing an equivalent level of surveillance has been achieved by a combination of procedures. (See Part V, 3, a, (2).)
- (4) Boar Testing Only
 - (a) Test 95 percent of the boars marketed in an area each year at slaughter.
 - (b) Trace 95 percent of the reactors to their herds of origin and eliminate the disease by testing or depopulation.

B. Qualifying Standards

1. Size of area--Usually an entire State; counties may validate or revalidate by the area method.
2. Length of status--3 years.
3. Testing period
 - a. Initial validation--18 months immediately preceding request for validation when qualifying by the market testing program or complete herd test method. Twelve months immediately preceding request for validation for alternate method 1 and 24 months when alternate method 2 is used.
 - b. Revalidation--18 months to 3 years depending upon method of qualifying herds.
4. Herd infection rates
 - a. Initial validation--Not more than 3 percent of the herds or one herd, whichever is greater, shall have been found to be infected during the qualification period. There must be no known foci of swine brucellosis in the area at the time of validation.
 - b. Revalidation--There is no acceptable level of infection in a validated State. Indigenous or introduced infection found after the qualifying period will cause loss of status if spread occurs or if the herd is not freed of the disease by testing or depopulation within 6 months. Lost status may be reinstated on the recommendation of the appropriate regional epidemiologist who documents that all deficiencies have been corrected and an effective epidemiological investigation to locate additional infection has been carried out.
5. Animal infection rates--Animal infection rates not considered.
6. Suspects--Card test positive swine disclosed in a herd which is otherwise serologically, bacteriologically, and epidemiologically negative may be held under herd quarantine until subjected to subsequent tests to determine the status of the animals.
7. Area status, if excessive infection rates occur--If an area does not qualify because of excessive herd infection rates, a new testing period must be established. All

herds in which brucellosis has been known to exist must be legally released from quarantine prior to area validation.

8. Movement of swine into or within Validated Brucellosis-Free Areas for the following purposes:

- a. Feeding--Feeding swine consigned to feedlots may move into or within validated areas without test provided such swine are maintained in isolation separate and apart from all breeding stock.
- b. Slaughter--Swine consigned to slaughter may move into or within validated areas without test. Such swine may not be diverted en route for any other purpose.
- c. Breeding or purposes other than 8, a and 8, b.
 - (1) Swine from Validated Brucellosis-Free herds or herds in Validated Brucellosis-Free Areas--No test requirements. Swine must be moved directly and must not have been in contact with swine of lesser status.
 - (2) Swine from Nonvalidated herds in Nonvalidated Areas--Individual swine from nonvalidated herds in nonvalidated areas must have a negative test within 30 days prior to the date of entry into a Validated Brucellosis-Free Area. These swine must be held in isolation and pass an additional test conducted between 60 and 90 days from the date of the test for entry before being added to the herd.

9. Movement of swine semen for artificial insemination into Validated Areas from:

- a. Purebred herds from which semen is collected must be validated on the basis of herd blood tests.
- b. Commercial boar studs from which semen is collected must be validated on the basis of herd blood tests and herd semen agglutination tests.

PART VI
Plans for Eradicating Brucellosis from Infected Swine Herds

- A. If infection is disclosed in swine herds, one of the following plans should be selected for eradicating the disease. Infected herds under test for area validation status should also choose one of these plans to eradicate brucellosis from the herd.
1. PLAN 1--This plan is recommended for commercial herds found infected. The following procedures should be carried out:
 - a. Market the entire herd for slaughter as soon as practicable.
 - b. Clean and disinfect houses and equipment.
 - c. Restock premises with animals from Validated Brucellosis-Free Herds, placing them on ground that has been free of swine for at least 60 days.
 2. PLAN 2--This plan is recommended for use only where it is desired to retain valuable blood lines. The following procedures should be carried out:
 - a. Separate pigs from sows at 28 days of age or younger and isolate.
 - b. Market infected herd for slaughter as soon as practicable. Infected sows should not be rebred and should be slaughtered as soon as possible. Complete isolation of infected animals is essential. The separated weanling pigs form the nucleus for establishment of the infection-free herd.
 - c. Test the gilts to be used for the following season about 30 days before breeding. Save only the gilts that are negative. Breed only to negative boars.
 - d. Retest gilts after farrowing and before removing them from individual farrowing pens or crates. Should reactors be found, they should be segregated from the remainder of the herd and slaughtered as soon as possible. Select only pigs from negative sows for breeding gilts.
 - e. If reactors are found in step d, the process is repeated.

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